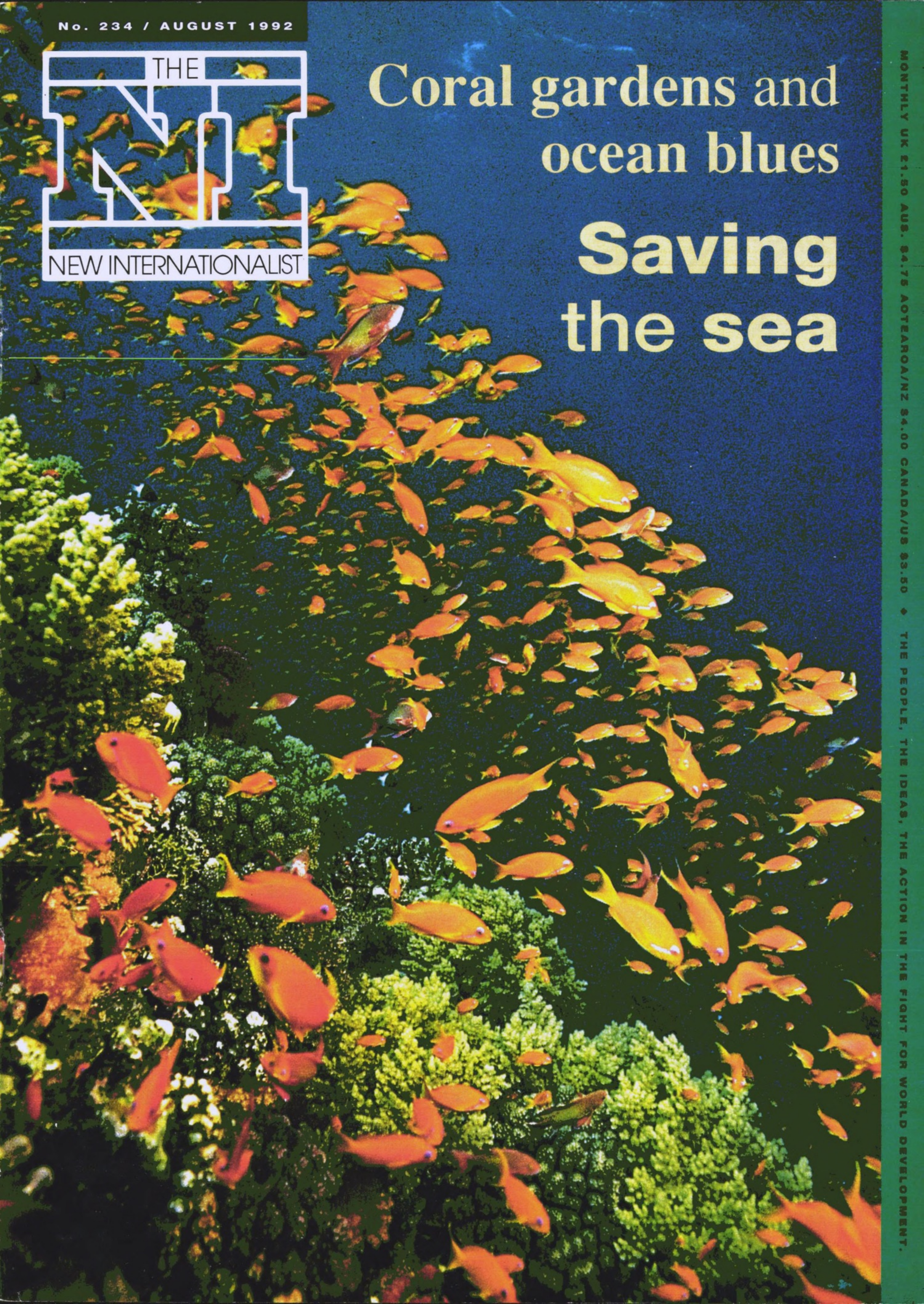




Coral gardens and ocean blues

Saving the sea



coming next **MONTH**



HECTOR CATTOLICA

SEX, LIES AND GLOBAL SURVIVAL

The NI Guide to Population and the Environment

Are you suffering from population paranoia? Does the destination of Spaceship Earth get you down?

There may be twice as many people on the planet in the middle of the next century as there are now. Some people say this would be a catastrophe – yet it wasn't even on the agenda of the Earth Summit in Rio. Others reckon it's just a diversion.

The NI takes you on a guided tour through the tangled debate about population growth and the environment and suggests a challenging way forward.

- How people use the planet ● Who consumes what ● Fact and fiction on population and the environment ● The real environmental culprits unveiled ● Planning, control and consent ● What is to be done?

Just published

Vietnam

The Price of Peace

by Chris Brazier

(NI co-editor)

THE first in a new paperback Country Profile series from Oxfam

Publications, **Vietnam: The Price of Peace** reports on life in Vietnam and the hopes of its people for the future. Once a symbol of rigid communism, the government of Vietnam now encourages people to set up small businesses and has opened the door to foreign investment. But the continuing US ban on trade and aid continues to severely hamper development more than 17 years after the end of the Vietnam war.

£4.95, 246 x 189mm, 64 pp, colour photos, ISBN 0 85598 152 0.

To order your copy, please write to P.O. Box 120, Oxford OX2 7FA, enclosing £5.94 (including 20% post and packing), or ring 0865 312415 to place a credit card order. Please allow 28 days for delivery in the UK.

Oxfam Country Profiles describe and explain the context of Oxfam's work overseas. Highly illustrated and intended for general readers, they will be of particular use to teachers, travellers and anyone with a need for a brief introduction to life in the featured country.



Registered charity no. 202918



ISSN 0305 9529

New Internationalist exists to report on the issues of world poverty and inequality; to focus attention on the unjust relationship between the powerful and powerless in both rich and poor nations; to debate and campaign for the radical changes necessary within and between those nations if the basic material and spiritual needs of all are to be met; and to bring to life the people, the ideas and the action in the fight for world development.

The **New Internationalist** magazine is published by **New Internationalist Publications Ltd** which is wholly owned by the **New Internationalist Trust** and co-operatively run by:- Vanessa Baird, Chris Brazier, Wayne Ellwood, Alan Hughes, Guy Montgomery, Gill Moore, Clive Offley, David Ransom, James Rowland, Sue Shaw, Debbie Simms, Kate Stott, Richard Swift, Dexter Tiranti, Jim Turner, Troth Wells. The **New Internationalist** magazine was founded by Peter and Lesley Adamson in 1970.

SUBSCRIPTION ENQUIRIES

Please write to your subscription office with full details including (if possible) your subscription number shown on the magazine address label. Please inform us of any change of address.

SUBSCRIPTION OFFICES AND ANNUAL PRICES

UK: 120-126 Lavender Ave, Mitcham, Surrey CR4 3HP. Tel. (081) 685 0372.

Individuals £18.40 p.a.; £5.40 qly.

Institutions £35 p.a.

Canada: 35 Riviera Drive, Unit 17, Markham, Ontario L3R 8N4. Tel. (416) 946 0406. Fax (416) 946 0410.

Individuals 1 yr – \$44.94 (includes \$2.94 GST)

Overseas (by air) 1 yr – \$50

Institutions 1 yr – \$62.06 (includes \$4.06 GST)

GST Reg No R121784854

United States: PO Box 1143, Lewiston, NY 14092. Tel. (416) 946 0406. Fax. (416) 946 0410.

Individuals 1 yr – \$42; *Overseas (by air)* 1 yr – \$50;

Institutions 1 yr – \$58

Australia and PNG: PO Box 82, Fitzroy, Victoria 3065. Tel. (03) 419 7111.

Individuals A\$37.50; *Institutions* A\$47.00.

Aotearoa (NZ): PO Box 1905, Christchurch.

Individuals \$42 *Institutions* \$49 (includes GST).

Rest of the World: 120 – 126 Lavender Ave, Mitcham, Surrey CR4 3HP. Tel. (081) 685 0372.

Individuals £22; *Institutions* £40. Please pay in sterling by UK Cheque, Eurocheque, Visa, Mastercard or Banker's Draft. Despatch by air only.

EDITORIAL AND ADVERTISING OFFICES

UK: 55 Rectory Road, Oxford OX4 1BW. Tel. (0865) 728181. Fax. (0865) 793152. [Advertising: Tel. (0384) 373421. Fax. (0384) 441904]

Canada: 1011 Bloor Street West, Toronto, Ontario M6H 1M1. Tel. (416) 588 6478. Fax: (416) 537 6435.

Australia: PO Box 82, Fitzroy, Victoria 3065. Tel. (03) 419 7111.

MAILINGS

Occasionally we allow organizations to mail our subscribers. If you do not wish to receive their material please write to your subscription office.

Cover and UK inside pages printed by Cradley Print Ltd, Warley, West Midlands.

North American inside pages printed in Canada by Webcom, Scarborough, Ontario.

The NI is distributed to the UK news trade by COMAG Specialist Division, Mercury Centre, Central Way, Feltham, Middlesex TW14 0RX. Tel. (081) 844 1000. Fax. (081) 751 2666.

The NI in North America (USPS 329-770) is published monthly by New Internationalist Publications, 1011 Bloor Street West, Toronto, Ontario, Canada M6H 1M1. US 2nd class postage paid at Lewiston, NY. US Post-master send address changes to: The NI, P O Box 1143, Lewiston, NY 14092. US Office of Publication, Lewiston, NY 14092. Registered with Alternative Press Index.

Syndication/Permissions: Cover Stories, The Observer, Chelsea Bridge House, Queenstown Road, London SW8 4NN. Tel. (071) 350 3228. Fax. (071) 627 5570.

Reproduction of all material in NI, excluding photographs, is free for use by schools.

© **New Internationalist Publications Ltd.**

N I A W A Y



INDIA 1992/93

Ecotrains is an ethical tour operator working with Oxfam. As well as visiting the great attractions of India our tours offer a unique opportunity to see development projects at first hand. This is the first time a major Aid Agency has offered the chance to see how donors' money is spent. Our tours are thought-provoking, they challenge many myths about poverty in the developing world. For a brochure please write to:

**ECOTRAILS, 351 King Street,
Hammersmith, London W6 9NH
or call 081 846 9963
Fax 081 748 1034**



FULLY BONDED
DO257

THE YEAR OFF HANDBOOK

Just Published ... **THE YEAR OFF HANDBOOK** ... tells you how to get out of recession-hit Britain and spend up to a year travelling the world – **AND GET PAID FOR IT!**

HOW WOULD YOU LIKE TO: Work as ground crew with Hot-Air Balloons in America, France or Switzerland? Ranch-hand in Australia? Spend the summer crewing on a yacht in the Mediterranean or Caribbean? Find well-paid jobs in Hong Kong or Singapore? Work in a New Zealand ski-resort this summer – or in the Alps next winter? Help build schools & clinics in Botswana? Wildlife Conservation in Namibia? White-Water Rafting in Zimbabwe? Scuba-Diving in Malaysia? Or join expeditions in South America, Africa or Mongolia? Easter on a Kibbutz in Israel? Spend the summer on a travelling fair in the USA? Work with kids at an American summer camp? And Much, Much More ... all in **THE YEAR OFF HANDBOOK** ... never previously published.

Publisher's Note – Roger Jackson, the author of this detailed publication, has spent the last 8 years actually doing all of these things. Now he has written this guide showing how anyone 16-40 years old can enjoy similar experiences. **And enhance your CV & job prospects when you return. Order now – you won't regret it!**

For your copy of **THE YEAR OFF HANDBOOK** send cheque/PO for £9.95 (includes P&P) to: **Sabre Publishing Ltd, Sabre House, 129 Mercers Road, London N19 4PX.** Or telephone 071-281 9181 (24 hrs) for credit card orders.

THAILAND & SE ASIA



Hilltribe treks,
rice barge cruise,
elephant rides,
Golden Triangle,

Vietnam, Bangkok, Samed Island, Java, Sumatra, Borneo, Malaysia, rain forests, Komodo Dragons, Mt Kinabalu, Polynesia, Cook Is, Fiji and much, much more! For the very best in treks and adventures throughout SE Asia, give us a call!

Exodus (room NI)
9 Weir Road, London SW12 0LT
081-673 0859 (24 hrs)
AITO 1030 ATOL 2582

★ USA ★

★ AFRICA ★

★ S. AMERICA ★

★ WORLDWIDE ★

**EXCLUSIVE LOW FARES
FROM A SPECIALIST
AGENCY.**

KEY TRAVEL

**94-96 EVERS HOLT
STREET**

LONDON NW1 1BP

Telephone: 071 387 4933

ABTA IATA

After 1492... and all that... Find out more
about the real challenges facing Latin
America today read

Poverty and Power Latin America after 500 Years

a NEW collection of important essays from John King, Jenny Pearce, Jutta Blauert, George Gelber, Seamus Cleary and George Monbiot, with profiles of each country and a fact file of key social and economic indicators.

£12.99 hardback (ISBN 1 871549 28 0)

£6.99 paperback (ISBN 1 871549 27 2)

CAFOD
on the side of people in need

Order your copy from any good bookshop,
or by post, (adding 20% for UK P&P, 35%
for overseas), from CAFOD Resources,
Room NI, Romero Close, Stockwell Rd,
London SW9 9TY

Galapagos

Follow Darwin and
sail the islands with
accredited naturalist guide

David Horwell

with tours of **Ecuador**
including **Andes** and **Amazon**

BOOK NOW FOR JAN/MAY 93

Details from:

Galapagos Adventure Tours

Department NI

29 Palace View, Bromley BR1 3EJ

Tel: 081 460 8107 Fax: 081 460 7908

Highland Wildlife and Marine Studies

Enjoy immediate access to the sea
and some of the most magnificent
mountains in Britain without
having to spend hours in a minibus.
Small groups, personally led by
resident naturalists Jeremy and
Annika Robertson (both PhD's in
ecology), explore the surrounding
hills and sea shores to experience
wildlife in its natural surroundings.
Send for full brochure.

**Inveralligin Field Centre
Alligin, Loch Torridon
Wester Ross, IV22 2HB
Telephone: 044587 247**



Highlands & Islands
OF SCOTLAND



GIVEN THE CHOICE,



wouldn't you invest your money 'ethically'?

If you are investing in a unit trust, a personal pension or a life assurance, the fund behind it is probably holding the shares of companies who do things you don't believe in.

Pacifists are investing in armaments firms, teetotallers in breweries. ASH supporters are investing in tobacco conglomerates, environmentalists in companies with a bad pollution record. And so on...

But it doesn't have to be that way.

Barchester specialises in targetting those investments which put the energy of your money in the direction of your values. In the pensions field, for instance, the longest established of these funds has outperformed 88% of all individual UK Growth pension funds over the last 7 years.

So 'ethical/green' investment doesn't have to be unprofitable.
And 'profit' doesn't have to be a dirty word.

Why not ring us (24 hrs) on 0722 331241, or send the coupon.



BARCHESTER
- Giving you the choice



To: **BARCHESTER Insurance & Investment**,
32 Market Place, FREEPOST, Salisbury SP1 1BR.
Please tell me more about ethical/green options in personal finance.

Name: Address:

Tel:
Remember, the price of units can fall as well as rise and past performance is not a guarantee to the future.

NOMAD AFRICA

Rift Valley Camping Safaris

18 Days Okavango Delta
and Victoria Falls £485

20 days Mountain Gorillas
and Serengeti £495

6 week Rift Valley
Safari £545.

Departures from 4 Oct 92.
(Price excludes flights.)

Free brochure: 0672 86333.

Nomad Africa Ltd.
Marlborough SN8 1AA.

AFRICA EXPLORED OVERLAND CAMPING EXPEDITIONS

LONDON TO NAIROBI

22 weeks, 15 countries
Regular departures £1150

SAHARA DESERT OVERLAND EXPEDITION

8 weeks, 6 countries UK to UK
Regular departures £560

VICTORIA FALLS SPECIAL

5 weeks, 5 countries (East Africa)
Land only
Regular departures £300

**Tel: 0633 222250 for FREE brochures
or write:
AFRICA EXPLORED, 126 Stow Hill,
Newport, Gwent NP9 4GA**



This is the peaceful idyllic retreat



The Townshends bought



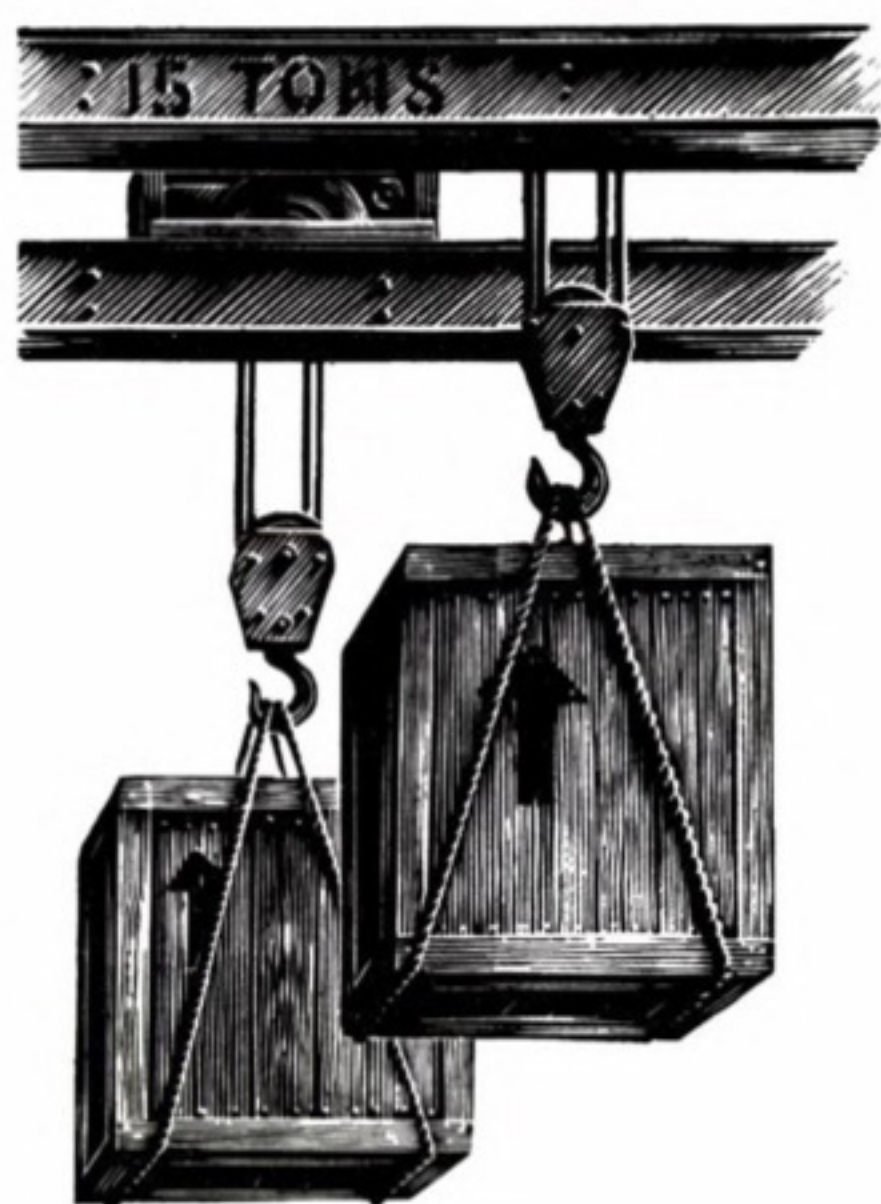
Using money they kept



In their bank



Who'd lent their money



To a company supplying
oppressive regimes with



Missiles and bombs.

It happens.
But not at the Co-operative Bank.
Our customers know there are some things
we will never invest in.
Such as companies that export armaments
to oppressive regimes.
Our policy is to lend only to companies
we believe to be as sound ethically as they are
financially.
Of course, we still provide all the normal
services you'd expect from a clearing bank with
assets of £2.8 billion, 5,000 'Link' cash machines
and a full telephone banking service.
The difference is that along with financial
peace of mind our customers receive one other
important benefit.
More peace of mind.

The CO-OPERATIVE BANK

C O N T E N T S



Coral gardens and ocean blues 4
Wayne Ellwood checks the health of the sea.

Tourism time bomb 8
What happens to the sea when the vacation is over? Sue Wells and Nick Hanna investigate.

Voices of the sea 12
Four testimonies from around the world by people who depend on the ocean.

Sleepwaves and dreamtides 14
A personal reflection on the myth and meaning of the sea by writer Sharon Doubiago.

THE SEA - THE FACTS 18

Blue Revolution 20
Rick Boychuk asks whether farming the seas can feed the hungry.

Simply - how to clean up the sea 22

Toxic tides and toilet wastes 24
Reports on coastal pollution from Australia, Canada and the Philippines.



Vacuuming the oceans 26
Factory fishing is wiping out the world's fish stocks argue Kieran Mulvaney and James Carr.

The squid, the cod and who we are 28
Rick Rogers on the war against nature.

Letters 2
Letter from Lahore 3
Update 29
Reviews: including Robin Norwood classic 32
Curiosities 34
Endpiece: by Carla Power 35
Country profile: Brazil 36

FRONT COVER PHOTOGRAPH: PETER SCOONES/PLANET EARTH PICTURES

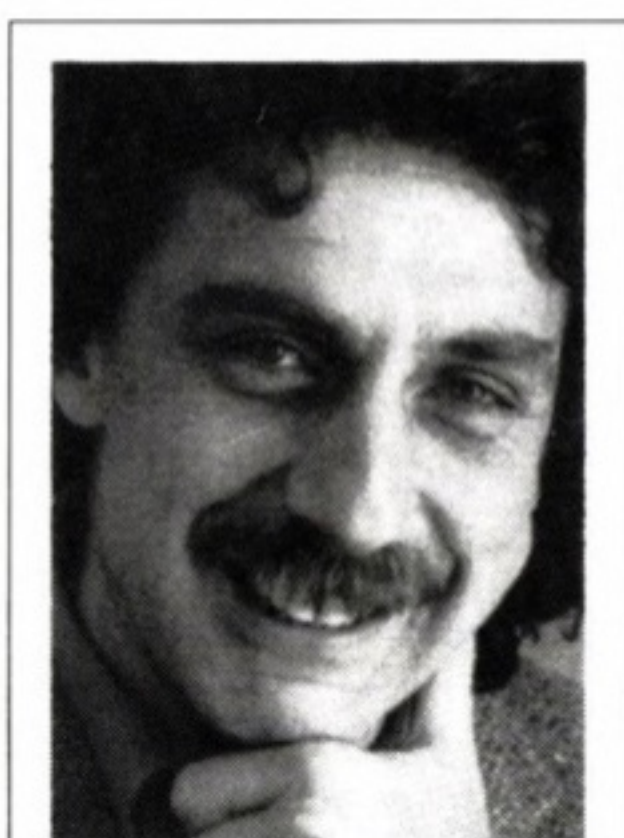
THIS MONTH'S THEME

Saving the sea

FROM THIS MONTH'S EDITOR

MY most intense memory of the sea is a harrowing hovercraft crossing of the English Channel. We rode 15-metre waves like a rollercoaster all the way to Calais and my passport was soaked with cold sweat as I lurched through customs. Since then I've flown over the ocean a great deal but never spent much time *in* it, or *on* it. So that's what I decided to do to prepare myself for this issue – to get my toes wet so to speak.

That's hard to do if you live, as I do, in the middle of the North American continent. For me the ocean was the stuff of romance – and a long-distance romance at that. My initial plan was to join a Greenpeace expedition to get some first-hand experience of the sea and of the work of the major activist group campaigning on marine ecology issues. Greenpeace was keen, but to my frustration, the timing didn't work out.



Trying to get a sense of ocean issues in the Third World was easier. I decided to look at one country – the Philippines. The more I read, the more it seemed the ideal choice. And when I got there my suspicions were confirmed. The challenge was to figure out what to focus on.

Back home the collapse of Canada's Atlantic cod fishery was front-page news. As I was coming to grips with sea cucumbers, cephalopods and tectonic plates, Newfoundland fishing communities took to the sea to protest what they saw as overfishing by foreign trawlers outside the country's 200-mile limit.

At the same time, the Canadian Government quietly deep-sixed the International Centre for Ocean Development (ICOD). This small Nova Scotia-based agency was mandated to help Third World countries manage their ocean resources sustainably. ICOD was unique among Western aid agencies in that its grassroots approach focussed exclusively on the sea. The Government defended its move as a cost-cutting measure needed to trim the deficit. In fact ICOD's budget was insignificant: the agency was gutted to please the ideological demands of the business community for less government 'meddling' in the economy. With no domestic constituency it was an easy target: the lessons of politics are always instructive.

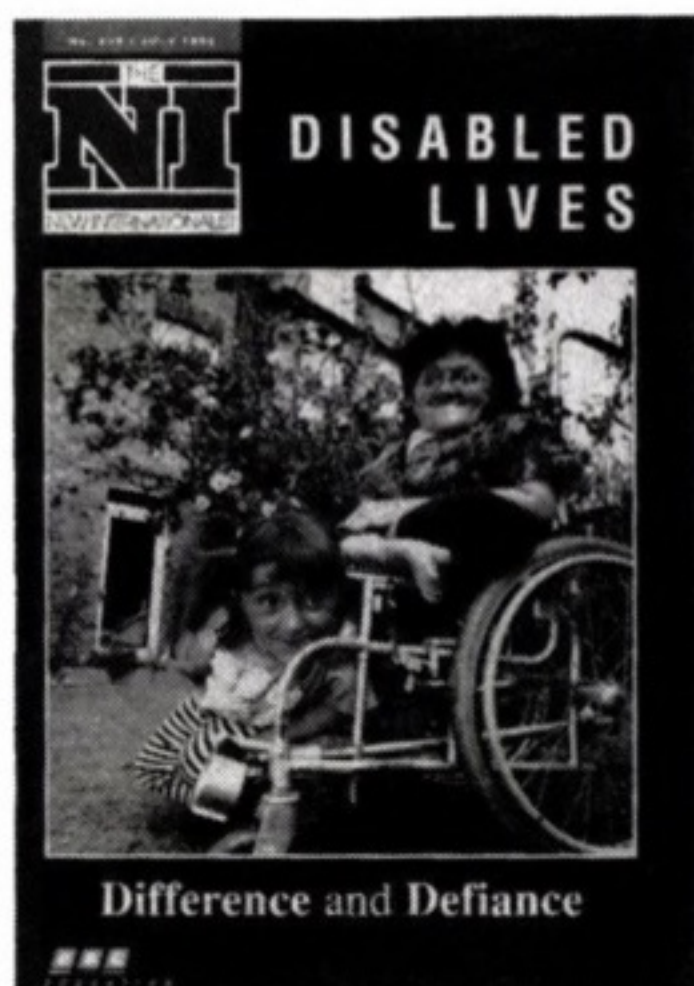
The interests of the politically-powerful are a central barrier to change in the Philippines too. Still, my time there did help me understand more clearly the environmental crisis facing the world's seas – and the urgency of doing something about it. However, it was the late Rachel Carson's insight into our human origins (which I've quoted at length at the top of page four) that made me feel the need to do something about it. Human blood, she wrote, has roughly the same chemical composition as sea water. Let me take you on a sea cruise – into yourself. Makes you think, doesn't it?

Wayne Ellwood
for the New Internationalist Co-operative.

A special thanks to Cristi Nozawa and Alex Ansula of the Haribon Foundation in Manila for generously giving their time and support. And thanks, too, to the other Haribon staffers who helped organize my travel along the Luzon coast.

Beautiful bodies

Able-bodied prejudice against disabled people (*Disabled Lives* NI 233) is rooted in the attitudes of self-hatred that many of us have towards ourselves and our own bodies.



This is perpetuated by the images of able-bodied men and women which appear in advertisements and films as 'ideal types' – standards against which we must measure ourselves. In this 'competition' many of us come to see ourselves as deficient.

It is vital that we unpick our patterns of self-hatred. Because only when we truly love ourselves will our fear and prejudice disappear.

Gillian Walker
London, UK

Mistaken identity

What Wolfgang Sachs actually does in your Development issue (*A Guide to the Ruins* NI 232) is in the tradition of German 'critical theory' of the so-called Frankfurt school. Each chapter is concerned with a concept which is then subjected to criticism as being one-sided, simplistic and distorting of reality. This theoretical approach derives from Hegel, and is useful to an extent, but there comes a point when it is in danger of turning into sophistry.

For example: Sachs argues that in societies not built on wealth accumulation the economy 'does not stamp its rules and rhythms on the rest of society'. But surely it does: for example in a horticultural society, human action is ruled by the rhythms of the seasons and climatic change



The **New Internationalist** welcomes your letters. But please keep them short. They may be edited for purposes of space or clarity. Include a home telephone number if possible and send your letters to the nearest editorial office. The address is inside the front cover.

in the economies of food production. The very distinction which Sachs tries to make between 'economy' and 'culture' may not be valid in many societies, with the result that the rhythm of the 'economy' is the rhythm of the society as a whole.

The villain has been wrongly identified here: it is not economics which are at fault but capitalism. How are we ever going to arrive at an adequate understanding of the world system unless we identify the problem correctly? And how can we ever deal successfully with capitalism unless we give more serious attention to the task of economic analysis and explanation, which 'culturalists' like Sachs so blithely dismiss?

Peter Somerville
Manchester, UK

Culling girls

The article *Aborting Girls Increases* (*Updates* NI 230) invites us to be shocked by the practice in India of aborting female fetuses. Although NI may otherwise defend the right of every woman, whether pregnant or not, to determine the fate of her own body, the article implies that these decisions are being made by chauvinistic Indian men.

Yet ultrasound and other methods of prenatal sex determination are available only to the Indian rich, among whom women's views are respected,

especially in family matters such as child-rearing. It is precisely these middle-class women who decide to abort female fetuses because they have known how it was to have been an undervalued girl in Indian society.

And while the idea of gender selection by abortion is distasteful, two desirable consequences might follow. First the cost to parents of a girl's dowry would decrease, and the practice might even die out. Second, if more males are born, Indian parents may no longer consider it necessary to conceive so many children in order to guarantee them sufficient sons to care for them in their old age.

John Stevens
London, UK

Clash of views

Chris Brazier's review of 'The Clash' (NI 229) was an interesting snapshot in time of one generation of rebellious youth. Brazier seems disappointed that the reality behind this rebellion was apolitical. I say good! The problem with subcultures isn't that they sell 'sex, drugs and rock and roll'. It's that they sell identity.

Subcultures are an ersatz community in the mass market. The denizens of these subcultures NEED the great unwashed outside in order to feel a false sense of superiority. They deliberately, even if unconsciously,

exacerbate differences to provide the necessary distance. This is the precise opposite of what a political movement should be doing.

By coincidence your review of Daphne Hampson's 'Theology and Feminism' was placed right next door to the Clash review. That she 'shows her sympathy' with 'many attempts to re-establish new rituals and mythologies' is not to her credit. These attempts degrade feminism to the level of a cult. They serve the needs of the existentially dead, not the needs of the general population.

Dr Pat Murtagh
Winnipeg, Canada

Victory

According to the article by Chris Phillipsborn (*Updates*, NI 229), the Stone Container Corporation struck a deal with the Honduras Government. I wrote a letter to a local provincial newspaper on this matter since we have the Stone Consolidated here in Bathurst.

According to an article published in reply to my letter, the Stone Corporation no longer has a deal with the Honduras Government. The Honduras Government cancelled the deal due to pressure from local environment groups and other pressure groups. A little victory against a multinational corporation and a strong regime.

Gilles Halley,
Development and Peace
Bathurst, Canada

Backchat

In your article dealing with the Oxfam-Québec scandal (*Changing Charity* NI 228), I am quoted as saying that 'all non-governmental organizations work in a deteriorated climate and are going down the drain'. The use of the word 'all' is not accurate and does not reflect the general discussion I had with your reporter at that time. The fact that I am the only named outside independent source used in this article tends to cast a very dark shadow on many NGOs who are doing responsible jobs in international development.

In the case of Ethiopia which we discussed in our interview, many NGOs went through a rapid growth crisis and were sometimes unable to inform the

Challenging question

When are all the politically correct people going to tell us to call non-developed countries 'developmentally challenged'?

Mark Pack
York, UK

I just happened to mention that she comes from a developmentally challenged part of Gaia and she said "Here's a challenge for you! ☆* Now find a casualty department that's still open."



Canadian public about what was really going on in the country: war, corruption, the diversion of aid. But some NGOs did understand the necessity of giving a critical account of what was going on in Ethiopia.

As your article underlines, the Oxfam-Québec scandal is a very good example of concerns about public control and accountability in matters of aid. Unfortunately, many NGOs did not want to go on the record to comment on this scandal. It is clear that the Oxfam-Québec scandal has hurt the aid community; over the last few years, Quebecers have become less and less generous towards international aid campaigns.

I believe that both the practices and messages of Oxfam-Québec and other marketing agents of human misery must be changed.

Yvan Patry
Montreal, Canada

Environmental idiocy

Is it not time that we persuaded the Americans that their attitudes towards the rest of the world can no longer be tolerated? Surely there can be no-one left alive who, having seen President Bush's attitude towards the Earth Summit in Rio, could possibly believe that the US gives a fig about the social and environmental conditions of any part of the planet (including its own)?

While it may be a little hard to sanction this dinosaur of a superpower as it continues to hold the rest of the world to ransom, we could all play a small personal part by boycotting many US company products. The economic damage done to monopolies like Coca-Cola and McDonalds may be small initially, but I don't believe that either of them would enjoy the prospect of being tarred with the same brush of environmental idiocy as the Bush administration.

Or have we all been bought and paid for...?

Glenn D Barker
Peterborough, UK

The views expressed on the letters page are not necessarily those of the NI.

LETTER from **LAHORE**

Gun law

Encountering strangers on a dark street can be frightening. But, according to Maria del Nevo, they are even more to be feared if they are in police uniform.

A FEW years ago when I was living in Lahore I travelled by public transport and although I was warned that it was not safe after dark, the warnings only vaguely worried me: there were usually many people around to protect me.

When I returned at the end of last year, the warnings were more serious. I heard stories of how couples were stopped at gunpoint by groups of boys who held down the man while they assaulted the woman. I heard of *dacoits* and muggers, who owned the streets after dark... but most worrying are the activities of the police who are supposedly countering this crime wave.

I had only been back a few weeks when a journalist colleague of mine, Zareen, had to cross the city by night in a rickshaw. She was stopped about a kilometre from her house at a police barricade.

A police officer opened the flap door of Zareen's rickshaw and questioned her repeatedly. They let her go after about five minutes. But when she eventually reached her road which is lonely and dark, lights flashed in the rickshaw mirror and the driver slowed down.

The same police officer got out of a van in which eight other constables were sitting holding on to their kalashnikovs. He peered in at Zareen and asked the same questions. She was scared. When silence fell he fixed his eyes on her and she briefly wondered if she would ever get home.

She was eventually released but she had good reason to be fearful. The police in Pakistan have become notorious for bribery, mistreatment and violence. All too frequently you hear of people being tortured in police cells and the incidence of rape in custody is causing increasing concern.

A few weeks ago a Christian couple were in a rickshaw when the police stopped them and accused them of carrying alcohol (which is only against the law for the Muslim majority). They pulled the couple out of the rickshaw and beat up both in broad daylight on a busy main street. No-one dared to intervene.

Shortly afterwards something similar happened to a group of boys who were returning late at night from paying their condolences to a bereaved family. They passed through a police picket on the Sherpao Bridge and drove on despite being signalled by the police to stop. Almost five kilometres on, outside the Governor's House, the police mobile squad came up beside the boy's car and fired at it. The 22-year-old driver, Yaseen, got out with his hands up, imploring them not to fire because he was unarmed. But the police shot him in the chest three times, killing him instantly. And when the other passengers clambered out they were shot in the legs and left bleeding in the road.

Following this cold-blooded killing, the police

did a fantastic job of confusing public investigators. There had apparently been another mobile squad out that night, cruising the same area, so there were problems of identification. And the two squads accused each other while they all claimed innocence. The chief of police defended the crime by saying that 'the police shot when Yaseen got out of the car because they thought he might be armed'. The incident has not been for-



MIRIAM MCCURDY

gotten, but no-one expects justice any more.

Last year a young boy drove into a police picket in the dark and was killed. After the incident the Multan Bench of the Lahore High Court declared police barricades illegal. But a subsequent news item reported that the police had been authorized to shoot anyone who passed through a police picket when they were hailed to stop.

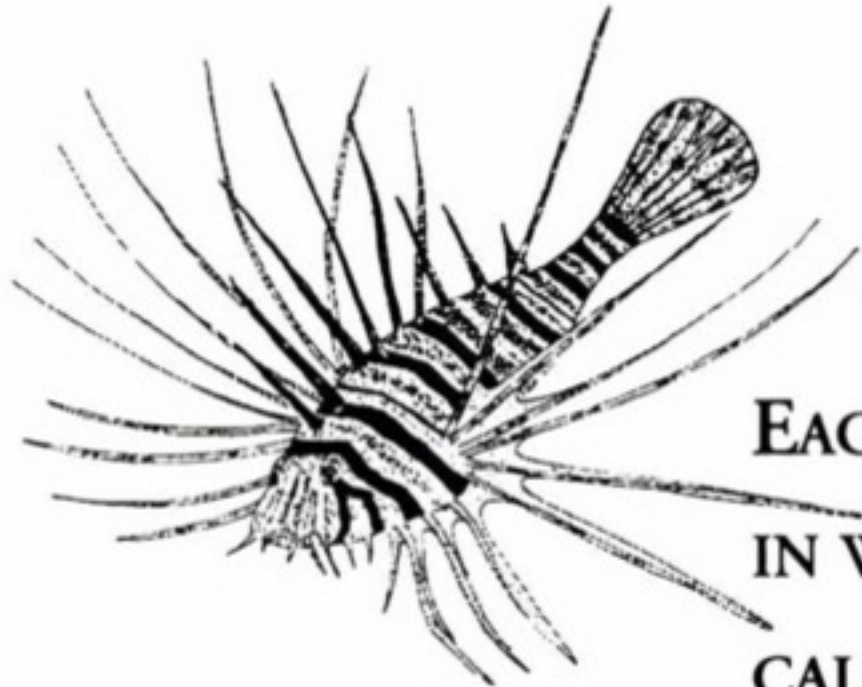
More worrying still, police powers were recently augmented by the Terrorist Affected Areas Ordinance, under which a local magistrate is empowered to declare any area 'terrorist affected' if the number of listed crimes is on the increase. Police constables (who can be recruited here on the basis of just a single matric pass) are then entitled to search without a warrant and to shoot a person 'suspected' of being about to commit one of the specified crimes.

The fear grows. Almost daily we hear of more atrocities committed by the police. Many families stay in their homes at night. It is like we are a people under siege by our own law enforcers. ■

Maria del Nevo is a former NI staff member who now lives and works in Lahore.



Saving the sea



EACH OF US CARRIES IN OUR VEINS A SALTY STREAM IN WHICH THE ELEMENTS SODIUM, POTASSIUM AND CALCIUM ARE COMBINED IN ALMOST THE SAME PROPORTIONS AS IN SEA WATER. THIS IS OUR INHERITANCE FROM THE DAY, UNTOLD MILLIONS OF YEARS AGO, WHEN A REMOTE ANCESTOR, HAVING PROGRESSED FROM THE ONE-CELLED TO THE MANY-CELLED STAGE, FIRST DEVELOPED A CIRCULATORY SYSTEM IN WHICH THE FLUID WAS MERELY THE WATER OF THE SEA.

Rachel Carson

Garden, highway, supermarket, playground, garbage dump: the sea is all of these – and more. Wayne Ellwood surveys the state of the world's oceans and asks what can be done to save them.

OUR shadows lengthened in the late afternoon sun as Noel Abulag steered his *banca* around a green point of land to the windward side of the island. The South China Sea lay in front of us. Behind, a half kilometre or so, lay San Salvador, a small fishing island off the west coast of Luzon in the Philippines.

Noel suddenly killed the engine and the out-rigger slogged to a crawl. 'This is our fish sanctuary,' Noel said, his arm describing a wide arc. I took his word for it since the choppy waves looked no different than the ones we'd been sluicing through for the past 20 minutes. I fixed my mask and snorkel, squeezed on my flippers and fell backwards into the warm water.

When the bubbles cleared I could see the reef below was teeming with life: orange and white clown fish, black sea urchins, yellow butterfly fish and brilliant red starfish. Huge coral heads reared up from the bottom, hundreds of small fish darting in and out of the crannies and crevices. A lionfish, delicate fins undulating like veils, danced along the reef edge.

Coral reefs like this one are 5,000 to 10,000 years old, though in the lifespan of the sea they are relative newcomers. The sea, in one form or another, has been around since the beginning – an ancient elemental force and the mother of all life. The first fossilized sea creatures are more than 500 million years old; the sea was a

pulsing source of life hundreds of millions of years before our first human ancestors made their appearance.

Today the timeless ebb and flow of the sea continues but the sea itself is changing. In the last 50 years we have begun to poison that salty womb and exterminate marine life with such efficiency that oceans around the world are under threat. No-one knows for certain what this might mean, for ourselves or for the future of the planet.

Later that evening, squatting beside his tidy, seaside hut, Noel explained how things have changed on San Salvador since a fish sanctuary was established in 1988. 'There are more fish all the time now, and not just in the sanctuary. They have spread



W. VANDIVERT / CAMERA PRESS

The timeless ebb and flow of the sea: an ancient, elemental force and the source of life.

from here all around the island. Before, everyone used destructive fishing methods,' he says. 'Aquarium fish gatherers like myself used to squirt sodium cyanide into the corals to catch our fish. People fishing for food used dynamite.'

The effect of the blast-fishing and cyanide on the corals was disastrous. The once-thriving reef was fast becoming a graveyard of broken, dead and shattered corals. And, as the reef died, the fish began to disappear. That's when the idea of a fish sanctuary was first raised, sparked by the success of a similar experiment at Apo Island in the central Philippines.

On the island of San Salvador a local non-governmental organization, the Haribon Foundation, took the lead, attempting a mix of grassroots organizing and environmental education. It took two years of determined work by Haribon community organizers to convince the islanders to accept the plan.

According to Alex Ansula, a Haribon staff member who worked on the original Apo Island scheme, this stage of building up community trust is critical. 'But it is slow, painstaking work,' he admits. 'We assign workers for at least two years and it can take months just to be accepted into the community. Initially people are suspicious, they look to us for handouts just like we were the Government.'

But the determination has paid off – the islanders now understand the value of protecting their reef. The 2.2-square-kilometre sanctuary is the heart of the scheme: all

fishing is prohibited within the area and local people make sure of that by taking turns standing watch against intruders. Outside the sanctuary a two-kilometre-wide 'marine reserve' rings the island; only traditional fishing gear is allowed there – no cyanide, no dynamite.

The sanctuary acts as a nursery, allowing fish, crabs, squid and other kinds of marine life to reproduce and slowly spread to the reserve. The 1,800 residents of San Salvador have a steady supply of fish and more secure incomes. Even the tasty and highly prized *lapu-lapu* is beginning to make a comeback. 'It's a lot better now,' says Guillermo Elorde, who started fishing with his father when he was seven. 'Before there was overfishing with small-mesh nets catching everything; now, with legal gear and the sanctuary as a breeding ground, the supply of fish is more constant.'

Blast-fishing

Coral reefs are one of nature's most spectacular creations. They have been called the tropical rainforests of the sea because of the myriad species that thrive there: more than 2,000 kinds of fish breed and live in reefs, about a third of all fish species.¹ And they are extremely productive. Reefs in the Philippines produce four times as many fish for their area as the commercial trawl fisheries along the coast.

But the Philippines is not the only country where coral reefs are in danger: dynamite fishing on reefs is a serious problem

in over 40 Third World countries.

Daniel Pauly of the International Centre for Living Aquatic Resource Management (ICLARM) in Manila says blast-fishing is symptomatic of what he calls 'Malthusian overfishing'. The basic problem is that there are too many people trying to make a living from the sea: 'Half the farmers in South-East Asia are landless. When their luck goes bad they drift to the coast.' The use of destructive fishing techniques, he argues, is a logical response to lower catches and lower incomes. Dynamite and cyanide destroy the environment and the fishery in the long run, but in the short term they may help put food on the table. 'Everyone comes to the coast and expects the sea to sustain them,' says Pauly.

This naive notion that the sea is infinitely exploitable is common the world over. Partly it springs from the sheer size of the world's oceans. Salt water covers more than 70 per cent of the planet and in some areas the ocean is more than 15 kilometres deep. The Pacific, the world's largest ocean, covers 165 million square kilometres, nearly five times the size of the African continent.²

Not only does the sea appear limitless, it is also seen as common property, owned by no-one and open to all. It's the familiar 'tragedy of the commons' – a free-for-all where everyone wants the booty but no-one can claim ownership or control. The UN Law of the Sea, passed in 1982 by 150 countries, was a rare attempt by the inter-



A Greenpeace diver examines a dead seabird caught in a Japanese driftnet.

national community to take responsibility for one part of the global commons. But that has foundered on the greed of Western nations who balk at the idea of a multi-lateral agency regulating private corporations interested in mining the seabed. So far the Law of the Sea remains well-intentioned rhetoric; only 50 of the 60 nations needed to formally ratify the document have done so. Not a single Western industrial country has approved it.

As a result there are few barriers to the harmful antics of humankind. Almost everything we do on land sooner or later has an impact on the ocean – and on coastal waters in particular.

More than 90 per cent of the world's marine fish catch reproduces in coastal wetlands.³ The coastal sea is critical to the health of the marine environment. Swamps, shallow bays and estuaries, mangrove stands and sea grass beds supply both food and shelter to young fry.

Yet it is here where our destructive habits are felt most acutely. Swamps are drained and mangroves hacked down. Industrial poisons and mine tailings are routinely dumped into our rivers; human sewage is flushed into our harbours; pesticides and other agro-chemicals wash off our farmlands and denuded watersheds. Once-pristine beaches and sheltered coves are paved with plastic and fouled by oil – the durable detritus of consumer society.

The major industrial nations in 1990 produced over 9 billion tons of solid waste, including 300 million tons of hazardous waste, much of which ended up in the sea. More than two million tons of liquid chem-

ical waste is poured into the North Sea alone every year.⁴

In the span of a few decades the ancient boundless sea that has challenged seafaring people for generations has been turned into a rank sewer. And the creatures that live there are reeling under the assault. Inshore waters the world over are badly polluted, shellfish like scallops and mussels are tainted with deadly heavy metals; crabs and fish laced with DDT and PCBs are disturbingly common. Marine mammals like dolphins, whales and seals wash ashore in mysterious 'die-offs', their bodies riddled with chemical poisons. Beluga whales in the St Lawrence estuary have been found with PCB levels high enough to qualify them as toxic waste under Canadian law. And toxic contaminants have been measured in the tissues of deep-sea fishes.⁵

The deluded attitude that the sea's resources are infinitely exploitable applies as much to the modern industrial fishery as it does to fisherfolk in the Philippines or Bangladesh.

Since the 1950s the global ocean fish catch has soared, sparked by vastly more efficient fishing gear. Today huge factory trawlers methodically criss-cross the world's oceans, from the Bering Sea to the Indian Ocean. Computerized fish-finding technology is so advanced that the fish don't stand a chance. Hundreds of these vessels, some as long as a football field, drag the ocean floor, hauling in as much as a quarter million kilograms of fish a day.

Environmental groups like Greenpeace accuse these deadly factory trawlers of 'clear-cutting' the oceans, relentlessly har-

vesting tons of fish with no thought for tomorrow. ICLARM's Daniel Pauly agrees: 'It's essentially a hunt for wild animals. Why should we expect that bigger and better guns will generate more game? It just doesn't work that way.'

There is now clear evidence of over-fishing in the world's major fisheries, from the Grand Banks of Newfoundland to the coast of Peru. Over the past 20 years, 9 of the 12 major groundfish species in the North Atlantic have been hunted into near-extinction. High-priced fish like tuna, which may fetch hundreds of dollars each in Tokyo, are doomed. In a world where the worth of the natural world is measured in cold cash they are just too valuable to live. Even the UN Food and Agricultural Organization (FAO), not known for alarmist warnings, says fish stocks are on the edge of collapse.

Yet despite all this efficient technology, factory fishing is extremely wasteful. Millions of tons of unwanted fish are swept up in the huge trawl nets; in most cases they're sorted out and thrown overboard – dead. The Alaskan pollock fishery dumps an estimated 300 million kilos of halibut, salmon and crabs back into the sea during the fishing season. In the North Sea this 'by-catch', as it's known, is more than twice the weight of fish brought to market.⁶

These massive trawlers also scour the sea floor, demolishing spawning grounds and levelling the habitat of bottom-dwelling creatures like sea anemones, mussels, clams, sponges and seaweeds.

Walls of death

But trawlers are not the only threat to this vital global protein supply. Driftnet fleets have also spread across the world's oceans over the last 20 years. The Taiwanese and the Japanese are the greatest offenders. These light, nylon nets up to 100 kilometres in length, equipped with radio buoys, are known as 'walls of death'. Although they target tuna and squid, millions of other sea creatures – including turtles, seabirds, sharks and porpoises – also become tangled in the nets. Despite a UN resolution calling for a moratorium on driftnetting only a few nations (Australia, Aotearoa/New Zealand, the US and Canada) have taken action, banning driftnets in their national waters. According to the UK-based Environmental Investigation Agency, Taiwanese driftnetters continue to operate with impunity – there are more than 130 such vessels in the Indian Ocean alone.

The pillaging of global fish stocks has been boosted by inequalities in the world economy. Debt-ravaged Third World nations have been told to export their way out of trouble and many have turned to their marine resources, encouraged by international lending agencies like the IMF

and, until 1984, the FAO itself. From 1984 to 1987 fish exports from protein-deficient poor countries increased by nearly 400 per cent. Six of the top eleven fish-harvesting nations are now Third World nations. One of the supreme ironies of this upsurge in exports is that as much as a quarter of the catch is turned into fishmeal and fed to chicken, pigs and cattle in the West.

About a third of the world's population lives within 60 kilometres of the sea and millions more are expected to pack coastal areas over the next decade. They come for a variety of reasons: some are driven from the land by poverty, war or famine. Others come for recreation, to breathe the salt air or, simply, to be close to the raw energy of the natural world.

No matter what the reason, by sheer force of numbers we are changing the sea — perhaps forever. Yet for most of us, marine biologists and oceanographers included, the ocean is a complex and unknown realm of mystery. Until the 1970s, for example, the deep sea floor was thought to be a black and silent void of few species. Yet scientists now believe that deep-sea species diversity may rival tropical rainforests. Little is known about ocean currents, how they work and what their impact on global weather patterns may be. And fishery experts admit to knowing little about the life cycle of critical food fishes like the northern cod.

Guns 'n' hunger

The world's mangroves are vanishing: an abstract notion to us but a matter of life and death to the people of St Helena, in the Philippines.

ONLY two years ago this whole area was covered with mangroves,' says Benjamin Herrera, pointing towards two huge, rectangular fishponds glinting in the midday sun. 'We used to catch lots of crabs here, big ones. But no more — now we can hardly find enough to feed our families.'

Benjamin lives in the seaside *barangay* (village) of St Helena in Bataan province, on the northern edge of Manila Bay in the Philippines. The small, one- and two-room houses in the community are neatly laid out along narrow dirt tracks. Occasionally there is a house built of concrete blocks with a corrugated iron roof — the mark of a family with a father, daughter, or son working abroad.

'That's everyone's dream here,' admits Francisco Liada. 'We know there is no future in fishing. We pray one of our children may be lucky enough to go to Saudi Arabia or Singapore and get a job as a labourer or a nanny.'

Things were a lot better before local entrepreneur Alfredo Pangelinan decided to move in and cut down several hectares of mangrove forest that bordered St Helena.

'The fishing was better then and we could always catch crabs,' says Francisco. 'Sometimes we could make \$10 or \$15 a day from the crabs. Now most of us don't even make \$25 a month.'

Mangrove trees are uniquely adapted to grow in salt water and the coastal wetlands they form throughout the Third World are the heart of tropical marine ecosystems. The trees form swamps which act as nurseries for hundreds of fish species, crustaceans and marine plants and as filters for sediments washed down from the land. The trees also buffer the eroding effects of huge waves and protect coastal dwellers from life-threatening typhoons.

The destruction of coastal mangroves in St Helena has been repeated throughout the Philippines and indeed throughout Asia. In the Philippines more than 500,000 hectares of mangroves have been reduced to less than 40,000 hectares today. Most of the trees have been cut to make salt-water fishponds — exactly as Alfredo Pangelinan has done in St

Helena. The mangroves are removed, steeply banked ponds dug by hand and sea water pumped in to fill them. The ponds are usually privately owned, sometimes by local businesspeople and sometimes by corporations. Only a handful of workers are needed to run the operations — a five-hectare prawn farm requires just three workers.

The big losers are the subsistence fishing communities along the coast whose livelihoods depend on the sea. Around 70 per cent of those who make a living from fishing in the Philippines are what are called small-scale 'fisherfolk'. For them the spread of fish farming over the last decade has been both an ecological and a human disaster.

Bowing to environmentalists and their own

Fisheries Department the Philippine Government banned the clearing of mangroves several years ago. But prosecutions of offenders never seem to get very far in the country's flexible legal system.

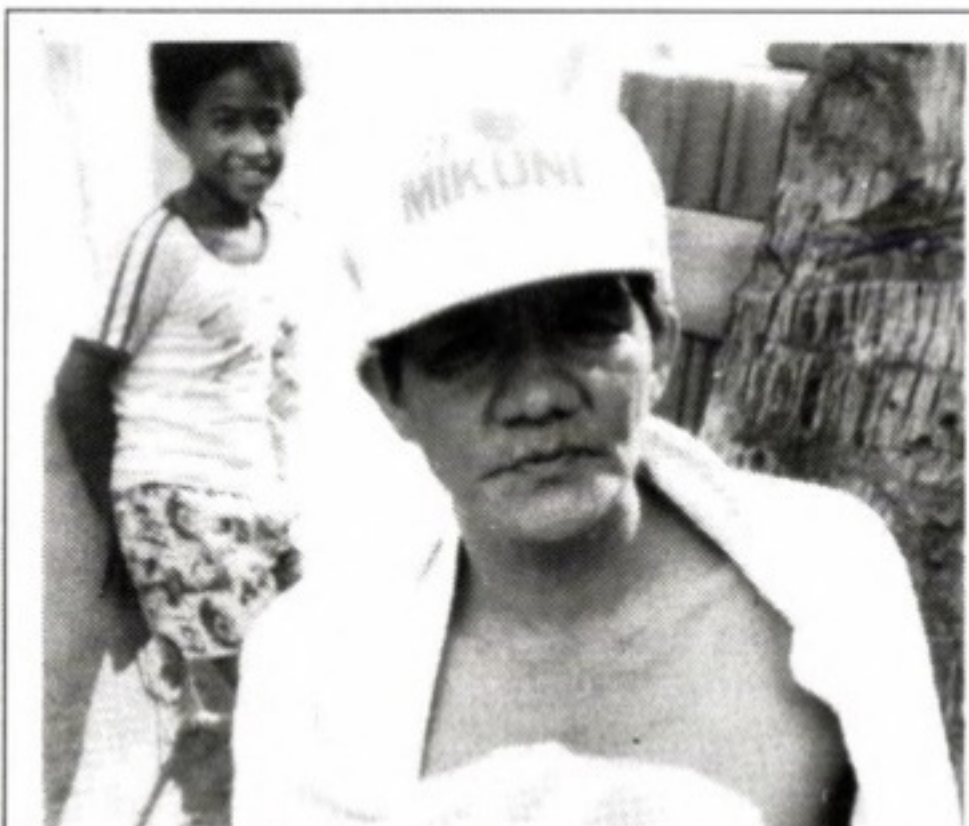
When community leaders in St Helena complained that the mangroves near their village had been cut illegally from government-owned land they were quietly ignored by officials from the

Department of Natural Resources. Shortly afterwards the local *barangay* captain was gunned down. Then Benjamin Herrera, an activist in the small fisherfolk's association, says he was abducted by Alfredo Pangelinan's brother and grilled for two hours. 'Now we are very careful when we have to leave the village,' admits Benjamin. 'We never walk in the dark by ourselves.'

With the aid of the Haribon Foundation, a local non-government organization, the fisherfolk of St Helena are challenging Mr Pangelinan in the courts, hoping to see the day when they can fill in the fishponds and replant their mangroves. But it's not going to be an easy battle. Nothing ever is in the corruption-riddled Philippines.

'The case is going ahead,' says Benjamin Herrera, 'but we are nervous. Now government officials tell us we should never have gone to Haribon in the first place, they tell us we are just troublemakers.'

Wayne Ellwood



Benjamin Herrera: abducted and grilled.

Phytoplankton shock

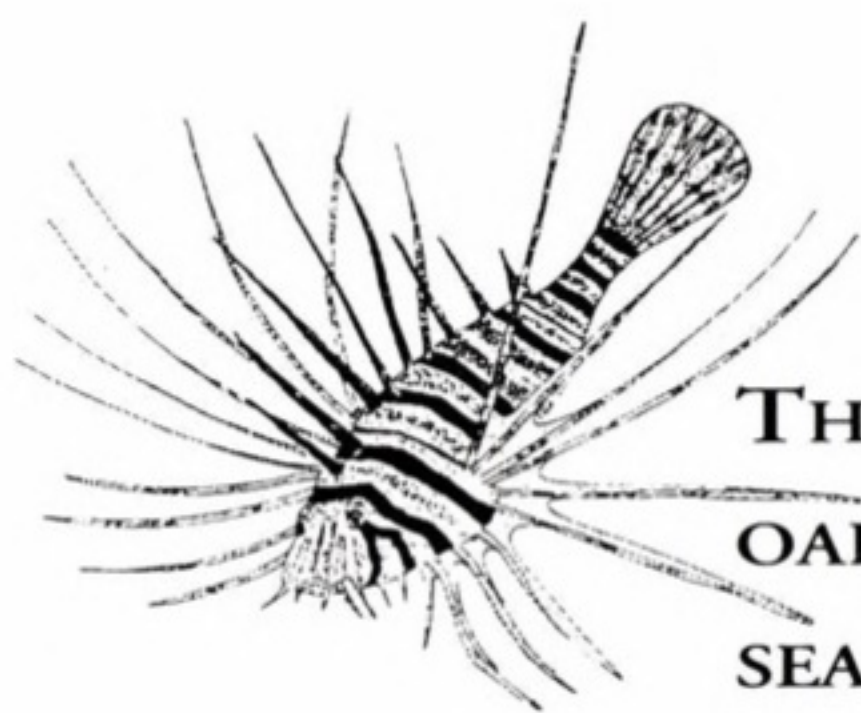
The scale of our ignorance is illustrated by recent revelations about the thinning ozone over the Antarctic. There is growing scientific evidence that increased ultraviolet radiation will dramatically limit the growth of phytoplankton in the Southern Ocean. Phytoplankton are microscopic plants which synthesize nutrients from the ocean. They produce 80 per cent of the world's oxygen and provide the basic food stock upon which all marine life ultimately depends. A steep decline in phytoplankton production could send shock waves through the food chain, with a potentially disastrous impact on fishes, birds, whales — and inevitably on ourselves.⁷

There is a lesson in all this: the marine environment, like the terrestrial environment, is vastly more complicated than we had ever imagined. The sea, the ancient symbol of timelessness, continuity and fecundity, is being overwhelmed by the breathtaking pace of modern life. Space-age technology, Third World poverty and old-fashioned greed have suddenly combined to form the first serious threat to the oceans since creation.

It's not too late to do something about it, but it is an uphill battle. The trick will be to convince political leaders that the needs of the environment are not those of the bottom line. That could be a tall order given the international climate in favour of free trade and open markets.

But giving the sea the benefit of the doubt at all times would be a start. Like the fisherfolk of San Salvador Island we can learn to protect and steward our marine resources for the future; or we can plunder them now and face the consequences. You don't have to be Neptune to see that living in harmony with sea is the only real choice we have. ■

1 *Our Common Seas*, D Hinrichsen, Earthscan/UNEP, 1990
2 *The Mysterious Oceans*, J Erickson, Tab Books, 1988
3 *World Resources*, 1992/93, World Resources Institute, Oxford University Press, 1992
4 *Ambio Journal*, May, 1991
5 *The Living Ocean*, B Thorne-Miller and J Catena, Friends of the Earth/Island Press, 1991
6 *Sea Wind*, Ocean Voice International, April-June, 1991
7 *The Potential Impact of Ultraviolet-B Radiation on the Antarctic Marine Ecosystem*, Environmental Investigation Agency, June, 1992.



THOSE ON LAND WHO RESEMBLE THE
OAK IN THEIR FIRMNESS BEHAVE LIKE
SEAWEED WHEN ON THE SEA

Rabindranath Tagore



Tourism time bomb

*Oh, those relaxed summers at the seaside: sun, sand and surf.
Shake them all together and you get the perfect holiday. But
what happens to the sea when all the tourists have gone home?
Nick Hanna and Sue Wells report.*

As the heat of the day begins to diminish at Diani Beach, one of the more popular resorts on Kenya's Indian Ocean coastline, it has become the custom for hundreds of tourists to parade the beach together, taking a sunset stroll before settling down for the evening in their respective hotels. Their footprints will be erased from the sand by the incoming tides, but their impact elsewhere is more devastating and long-lasting.

As they tuck into their evening meals, visitors from as far apart as Dusseldorf and

Delaware will be comparing notes on their après-safari beach holiday. Their menu for the evening will include mouth-watering delicacies such as lobster, grouper and snapper. They might be admiring the shells, coral necklaces and other curios which they've bought. Some will have been out on glass-bottom boats and may have made their first floundering attempts at snorkelling. Others will have ventured deeper into the sea on a scuba-diving trip, and may even be sporting cuts and grazes testifying to their close encounters with

sharp-edged corals. Some will have been deep-sea fishing, and will be proudly relating their attempts to hook marlin, dorado or even sharks.

Over the past 20 years there has been a boom in Third World 'sun'n'surf' tourism as cash-starved developing countries market their sandy beaches, swaying palm trees and coral reefs to sun-seeking visitors from the North. As well as the enormous growth in the volume of tourists (partly thanks to cheaper airfares), there have also been changes in what people do on holiday and



L. SMILLIE / CAMERA PRESS

they are now much more likely to take part in activities which focus on the ocean itself: windsurfing, snorkelling, sport fishing, whale-watching, sailing and scuba diving.

The economic value of this latest wave of beach and marine tourism is enormous. Around 100 million tourists visit the Caribbean annually, contributing between 40 to 70 per cent of the GNP of some countries in the region. Divers from the US spend an estimated \$286 million a year in the Caribbean and Hawaii. Even a relatively inaccessible spot like the Maldives attracts more than 160,000 visitors yearly to its sparkling coral beaches. The island nation had just two resorts in 1972; now there are more than 60.

But there is a price to be paid for this tourism explosion – and it is a price which is not reflected in the cost of package holidays. The tourist industry invariably markets tropical beach holidays with images of paradise and unspoiled nature. But the fact is that much of the frenzied development to attract the tourist dollar is both uncontrolled and badly planned.

In the last two decades the explosive growth in the construction of beach hotels,

resorts, marinas, golf courses, roads, shopping malls and airports has destroyed coastal habitats and threatened some of the most productive ecosystems on the planet. Apart from the Mediterranean, the coastal areas most under threat from tourism are in the tropics, where habitats such as coral reefs, mangroves and seagrasses are deteriorating rapidly under an avalanche of pink-fleshed sun-seekers.

Coral reefs, sandy beaches and scenic coastlines are what the tourist comes to see and developers are astute enough to try and maintain these. Other habitats are a liability and are the first to go. Mangrove swamps are dredged to make way for ports and marinas, destroying nursery grounds for many commercial fish species and increasing soil run-off and siltation. Seagrass beds are dredged for sand to be used in construction. The vulnerability of coral reefs to pollution and siltation is often overlooked: badly built coastal roads erode in the rain and wash into the sea. Hotels pump untreated sewage into the sea and boats and cruise ships dump it directly overboard. Where building materials are in short supply, as on small islands, corals are used for

construction – a minor problem when local housing was the only demand, but a serious concern in the case of large resorts.

Even sandy beaches are not immune. Hotels are built close to the shoreline to provide visitors with a view of the sea and easy access to the beach. But this alters natural sand movement, frequently causing erosion. Similar problems arise following the construction of jetties, harbours and artificial islands which interrupt natural currents and water circulation.

Coral reefs are particularly vulnerable; reefs in more than 50 countries have suffered some form of tourist damage. Although an individual diver or snorkeller may have minimum impact compared to other forms of reef damage, the cumulative effect of divers on a reef can be considerable.

Dive guides all over the world can point to once-pristine, flourishing dive sites where broken and silted corals mock the former richness of the reef. Divers can easily damage coral by standing on it, bumping into it, or holding on to it as they steady themselves in a current or look at marine life. Every day of the year, hundreds of boats, yachts, and glass-bottom boats send



FOOTPRINTS

Snorkellers test the water near Grand Cayman in the Caribbean: tourism has reduced much of the island's reef to rubble.

their anchors crashing down onto reefs. The lack of docking facilities for cruise ships in many countries means that they often anchor directly on reefs.

In the Cayman Islands, where 30 cruise ships anchor on a regular basis, a single 24-hour visit by a cruise ship can wipe out an area of reef the size of five tennis courts. Reefs in Georgetown Harbour on Grand Cayman have been reduced to rubble.

Tourism has also fuelled demand for products from the reef, both food and curios. Species that were once staples for coastal people – like grouper, snapper, conch and spiny lobster – are now luxury foods commanding high prices in restaurants and hotels. Corals, shells, dried pufferfish and other curios are sold in souvenir shops and beach stalls. Marine bric-a-brac decorates tourist hotel rooms and

restaurants. And there even is a growing market for corals and shell curios in Europe and North America.

In many countries in the South the economic benefits of tourism are an illusion. Foreign tour operators often own the hotels, the charter airlines and the travel agencies. So profits are mostly exported rather than going to local people: in the Eastern Caribbean, for instance, it has been estimated that only 18 cents of every tourist dollar remains in the islands.

Most package holidays isolate tourists in resort 'ghettos', cut off from local problems to which, all too often, they are unwitting contributors. Tourism boosters say the industry produces jobs. It does. But there are few of them and they're mostly in the service sector: low-paid jobs like chambermaids, waiters and cooks. Resort development also pushes up land prices and the cost of living, forcing people out of their homes. Once tranquil communities are overwhelmed by pollution, noise, roads and concrete monstrosities. Tourists from the North promote a different set of values, often destroying community morality and ushering in crime, prostitution and delinquency. Expensive infrastructure such as airports, hotels and roads drains investment from badly needed services such as health and education.

Despite this litany of ills, tourism is still seen as a sure-fire route to prosperity, particularly in small island nations. In some countries, where fisheries are depleted and other sources of cash non-existent, tourism seems to be the only option left.

In Belize and Costa Rica 'ecotourism' is being promoted as an alternative which ensures that natural resources are protected and that local people get some financial benefits. It sounds good, but there are dangers. All too often ecotourism is based on the assumption that just looking at nature is environmentally friendly. The irony is that all coastal and marine tourism could be described as ecotourism and yet, as we have seen, its rapid growth has been negative in many areas.

The important point is that whether it is called ecotourism, green tourism or sustainable tourism, it should be environmentally sound and help local communities. Experience shows that large-scale tourism rarely does either. A great deal of damage to coastlines and the marine environment has resulted from huge resort developments – from Spain and France to Mexico and Malaysia. Environmental impact studies are rare – and when they are done they're usually carried out by foreign companies.

Nevertheless, huge tourist complexes have some advantages. Large numbers of people are concentrated in a relatively small area, so their activities can be self-contained, limiting the spread of both envi-

ronmental and cultural disturbances. Many people attracted by such resorts are more interested in sunbathing, shopping and the hotel disco than in experiencing marine life at close quarters. If these resorts can be persuaded to contribute financially to the management of the surrounding natural environment, and if the local community is benefiting through more jobs, even large-scale developments may be of value.

Unfortunately, far too few large resort operators are prepared to make the necessary investments. Some, like hotel owners in Bora-Bora, are establishing marine reserves on adjacent reefs while others are helping distribute educational materials about reefs to their customers. But there needs to be a much deeper commitment –

along with government pressure on the industry to act responsibly. Tourism has to be seen as part of national or regional resource-management plans – too often it is seen as just another kind of ‘development’ with a blind emphasis on growth.

On small undeveloped islands, low-key community-based tourism is relatively easy to introduce. On Pohnpei in Micronesia one village has set up a ‘marine park corporation’ to promote tourism and has built canoes to take tourists out on day trips to the mangroves and reefs. In the Philippines, where a number of village-run fishery reserves have been set up on small islands, divers and other tourists are encouraged to visit in small numbers. The villagers provide accommodation and

raise money through the sale of food, souvenirs and diving fees to help finance the reserve.

Where pressure on a coastal area is already high, the priority is to determine the ‘carrying capacity’ for tourism: how many visitors can be accommodated without damaging the environment. All too often, the significance of carrying capacity only becomes apparent once it has been exceeded. The classic case is Hanauma Bay in Hawaii. By the late 1980s, visitors to this tiny bay sometimes topped 10,000 a day; soon shallow areas were largely devoid of living corals. In an attempt to give the reefs a chance to recover, regulations were introduced to prevent coaches from unloading passengers in the car park and snorkelling tours were banned. The park is now closed completely once a week to allow staff to clean up and carry out management duties.

There is also growing demand for sound environmental management from tourists themselves. A leading US diving magazine for example found that the most important criterion for choosing a diving holiday was the quality of the diving which far outweighed other factors including price. A 1991 survey at Bonaire Marine Park in the Netherlands Antilles, one of the top Caribbean reef diving sites, found that over 90 per cent of visiting divers would be willing to pay a park management fee. In January 1992 a fee of \$10 per visitor was introduced. With some 18,000 divers visiting a year this should comfortably cover the Park’s running costs.

Divers have become increasingly ‘green’ in recent years, switching from activities like spearfishing to more benign pursuits like photography. Dive tourism is critically dependent on the health of marine ecosystems so local dive guides are beginning to see that their prosperity is linked to the careful management of reefs.

However, tourists in general need to become more aware of their impact and of what they can do to help. A start has already been made in some countries. There is a network of groups such as *Tourismus mit Einsicht* (Tourism with Insight) in Germany and Tourism Concern in the UK helping to promote awareness of tourism problems in the South. Several ‘green holiday’ guides have already been published and there are signs too that the tourist industry itself is starting to take action on some of these issues. The difficulty will be waking up national governments to the fact that tourism cannot be allowed to rampage out of control as it has done in the past. ■

Nick Hanna and **Sue Wells** are authors of the forthcoming *Greenpeace Book of Coral Reefs* and are both members of the Coral Reef Team of the UK-based Marine Conservation Society.

Caddies & coral

Nora Syed-Ibrahim reports from Malaysia on tourism run amok.

REDANG Island is part of an archipelago of nine islands off the east coast of peninsular Malaysia. In 1985, the Malaysian Government recognised the region’s rich marine resources, especially its coral reefs, and declared it a protected area.

The goal eventually was to make a marine park. There was one hitch though: land is a state matter. And the local government was more interested in a vast new tourist development – a US\$130-million tourist resort.

The first phase of the project, now nearly complete, includes an 18-hole golf course (carpeted by imported Australian grass), a 100-room five-star hotel, 45 deluxe holiday villas and a sports complex.

Subsequent stages call for 100 condominiums, two 250-room hotels, 12 holiday villas, 80 holiday bungalows, eight presidential chalets and another sports complex. All this is to fit on an island which is just six kilometres wide and seven kilometres long.

Construction began in early 1991. Hills were terraced and mangrove swamps cleared for the golf course. Both the project’s developers and government officials assured critics that damage to the environment would be minimal. The Executive Chair of the Redang Island Resort Company claimed that Australian consultants had guaranteed the project’s safety. ‘If they had said differently, we would have gone elsewhere,’ he said.

In October, a group of journalists toured the island and were shown plastic sheets and coconut husk mats used to stop erosion of the

gored hillsides – as well as sump ponds and large rocks supposedly to trap sediments.

Suspensions that the measures were inadequate were confirmed in a World Wildlife Fund-Malaysia (WWF) report released in April 1992. The report found that the flimsy plastic sheets were swept away by the force of monsoon rains while silt passed through the rocks, flooded the mangroves and poured into the sea –

covering the coral with a fine layer of sediment. The WWF noted that sedimentation rates in the Redang River Estuary had increased by nearly 400 per cent. The agency charged that siltation in the waters around the island would cause irreversible damage to the coral reef and other marine ecosystems.

Meanwhile the 1,000 people who live in Kuala Redang, a small fishing village near the Redang River estuary, have lost their initial enthusiasm for the tourist mega-project. The whole village is to be relocated three kilometres inland so that new hotels can be built near the golf course.

The developer claims that the project will improve the fisherfolk’s standard of living by providing a clutch of new jobs – as low-paid gardeners, waiters and caddies.

Villager Deraman Ali is less than grateful for these ‘opportunities’. ‘Think of the damage it will do to the fishes and marine life,’ he says. ‘We depend on fishing for our livelihood. We were never consulted and our opinion was never sought.’

Nora Syed-Ibrahim is a research officer with Third World Network based in Penang.



Cleaning the cuttlefish: no consultation.

Voices *of the* sea

Chorkor Rascals

Elizabeth Ayele Tagoe, Chorkor, Ghana

I'm a fish smoker; that's what I've been doing for many, many years, even before I had my first child. Before I got married I was a trader in the market, selling cassava and plantains. Then when I met Kwei Kumah Amoo I decided to become a fish smoker. He fished for a living and I thought it best to smoke his catch and sell it so as to keep the money in the family.

Fishing at sea is hard work but it's the fish smokers who make money. Smoked fish is in demand all over Ghana, especially in the countryside. My main customers are women traders who buy the fish to sell to other people. Usually they pay cash but sometimes I give credit to my regular customers and my biggest problem is when those women don't pay.

When my husband died I continued with the fish smoking, and the business has helped me raise six children. I wouldn't say fish smoking has made me rich, but at least I've been able to build this four-roomed house.

During the fish season we hardly have time to eat. We rush down to the beach very early in the morning to await the boats. Then we carry the fish home in containers on our heads and start smoking it. We work from dawn to dusk. In the lean season when catches fall, we work once a week.

In this area they mostly catch herrings, especially the small ones that we call 'Chorkor rascals', or 'Keta schoolboys' (Keta is a fishing town in Ghana's Volta region). Don't ask me why they're called that; maybe because they're so small.

None of my five boys was able to finish school. They all preferred to follow in their father's footsteps and go to sea. I don't regret that – we make a satisfactory living from the sea, although it's not as good as it used to be. In the past we could get better prices and fish were abundant year after year. These days there aren't so many good fish seasons and the money we make buys less and less...

reported by **Ajoa Yeboah-Afari**



Blast-fishing

Edmundo Drio, San Salvador Island, Luzon, Philippines

Sitting under this big tamarind tree is a good place to work. It's cooler with the breeze from the sea and I can stop the water buffalo making a meal of that cassava.

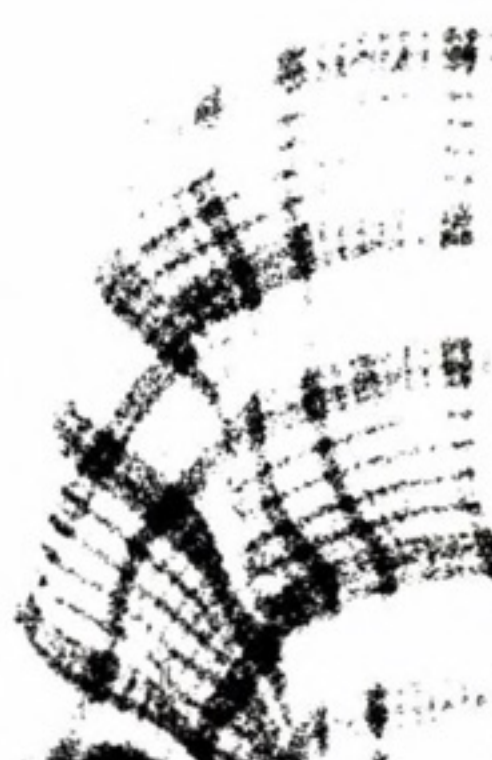
I'm slicing some rubber from this old inner tube so I can fix my speargun. I made the speargun myself. I use it to go fishing off the reef every day. I also wear these goggles: I carved them from wood and cut the lenses from some old plastic. They let me see the fish under the water. I can spear as much as ten kilos of fish on a good day. If I catch more than my family needs I can sell the extra in the market.

Do you hear the noise from that island over there? That's Magalawa. Over there they use 'boom-boom' fishing all the time. Go into any house and you can see dynamite. We used to do the same thing here until we made a 'fish reserve' around our island a few years ago.

I myself used dynamite for nearly 20 years. We would make our own with gunpowder and tin cans. But it was a dangerous business; I've seen hands blown off and men killed. We continued because there were always lots more fish and it was easy. We thought the sea was so big then; we could damage this reef and there would always be another with more fish. Now we know that's not true. The fish are beginning to return to our reef because all the fisherfolk on our island agreed to stop using dynamite.

Of course blast-fishing is illegal. But that makes no difference. Maybe the coastguards are deaf. Or maybe they're collecting a little 'grease money'. Some families blast as often as 20 times a day; even children use it. When I see the dead and broken corals I want to tell those who use 'boom-boom' to stop, but I am afraid they will attack me. Or maybe they will say 'yes, I will stop – but only if you promise to feed my family.'

reported by **Wayne Ellwood**



Hot water

J Nicholas Fernando, Negombo, Sri Lanka

Yesterday we caught only a few small fish, just enough for a curry for the family. When I have no fish to sell, I have to borrow money from a neighbour or a relation to buy food for my family. We are fully dependent on the sea for our livelihood. Most fisherfolk are poor and don't own a boat. Those better off may own an *oruwa* (a small sailboat) or two, and some even have motor boats, but for the past 28 years I have been using other people's *oruwas*.

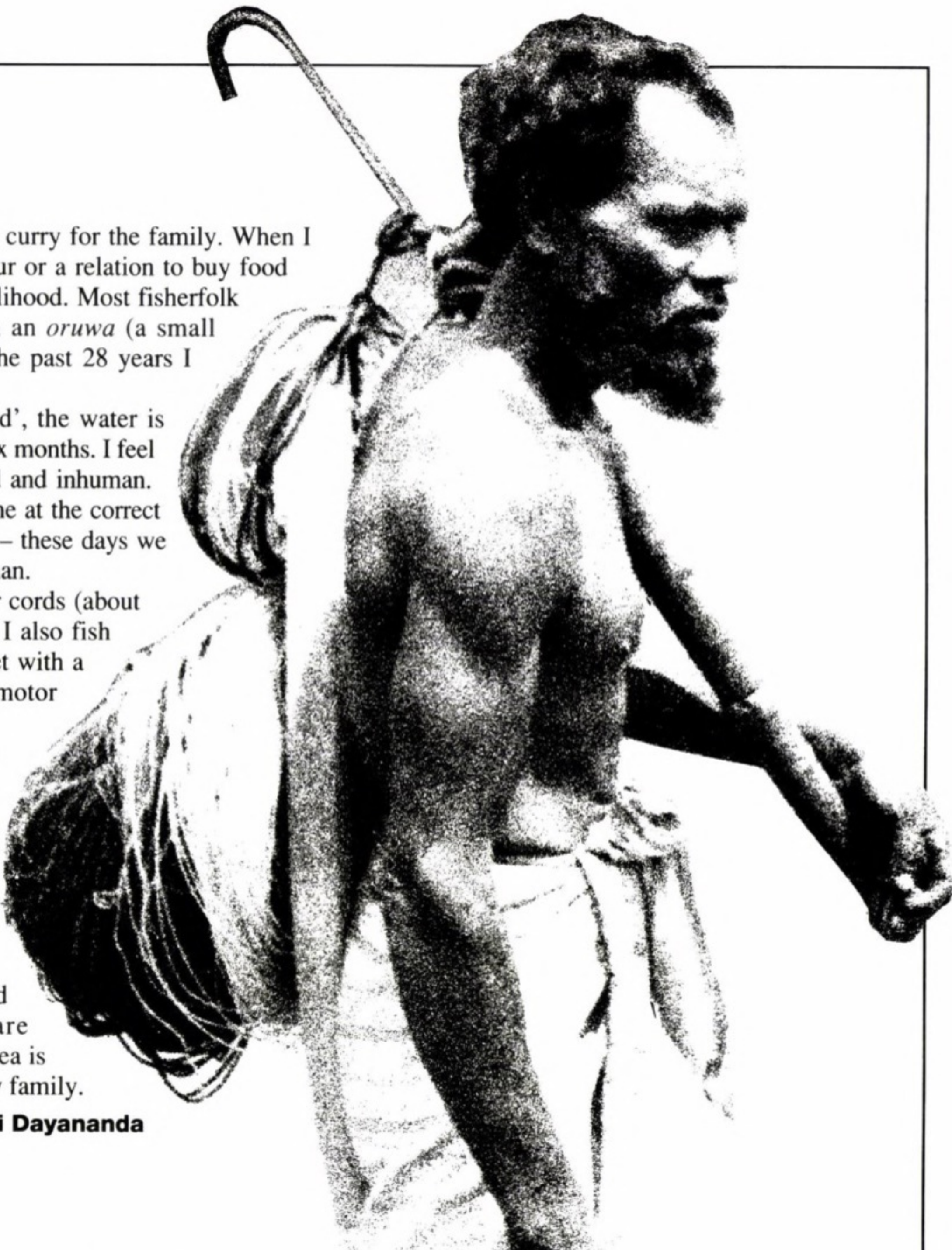
This year the catch has been poor. The sea is 'overheated', the water is getting 'burnt' because we have not had any rains for the past six months. I feel this is the wrath of the gods because people have become bad and inhuman. Some time ago it was quite different. The sun and the rain came at the correct time and we got a very good catch. All that has changed now – these days we can't catch a quarter as much as we could when I was a young man.

I don't use nylon nets. For deep-sea fishing I still use four cords (about 250 metres long) with a bait at the end of each. Besides this I also fish for prawns near the lagoon with a *madel madiya* – a small net with a side opening. Catching prawns is difficult because men in motor boats have spread massive nets all along the beach.

The sea has its hazards too. Three years ago my boat capsized in the middle of a violent storm. The waves were as high as a coconut tree. I remember it vividly. It was about ten in the morning and there were two others with me. All three of us held on for our lives. I removed my head cloth and started waving it. Floating in the deep sea, I prayed to God and asked for forgiveness for my sins. After an hour a boat spotted us and we were rescued.

I believe there will always be fish in the sea and that God will continue to give. Unfortunately human beings are responsible for scaring the fish in the sea in many ways. The sea is our life; I pray it will continue to sustain myself and my family.

reported by **Kumari Dayananda**



Day by day, nothing more

Juan Virgilio Delgado, San Mateo, Ecuador

I left school because I liked fishing better. When I was 18 I began to go out alone in a small wooden boat like a canoe. Almost every day I would bring in a marlin of maybe 50 kilos. There were many more fish then, and closer to shore: dorado, tuna, marlin. We weren't paid very much because there was no export; we'd take the fish to town and sell them in the local market.

Now it's harder to make a living. We can sell the fish for more because they are exported, but there are almost no fish close to shore. Ten or fifteen years ago, we could find fish less than 30 minutes out, but now we have to travel for two or three hours to reach them. Also there are many more people fishing, so every month there are less fish.

Four or five years ago the Japanese boats began to come. They are fishing for tuna and marlin – the same as us. The Japanese waste a lot of fish; with some they take off the fins and toss the rest back in the ocean. Also the big boats damage our nets. Our government made an agreement with Japan about a zone for the small fisherfolk. But when the big boats are caught violating the agreement there is so much corruption that they just pay a small fine to the Fisheries Ministry and go free.

There is also the problem of garbage going into the sea, especially during the rainy season when the rivers are high. There is no drainage, no sewage, and the only place for things to go is into the rivers and then into the sea. The fish are always looking for cleaner water, so they go farther out.

My father and grandfather fished for a living. I have five sons, and they all fish too. We have no land, and know no other life; we have always lived by the sea. We make a living but only to eat from day to day, nothing more. Sometimes I get tired of fishing and I want a change but I can't because there's no other work.

reported by **Judy Blankenship**

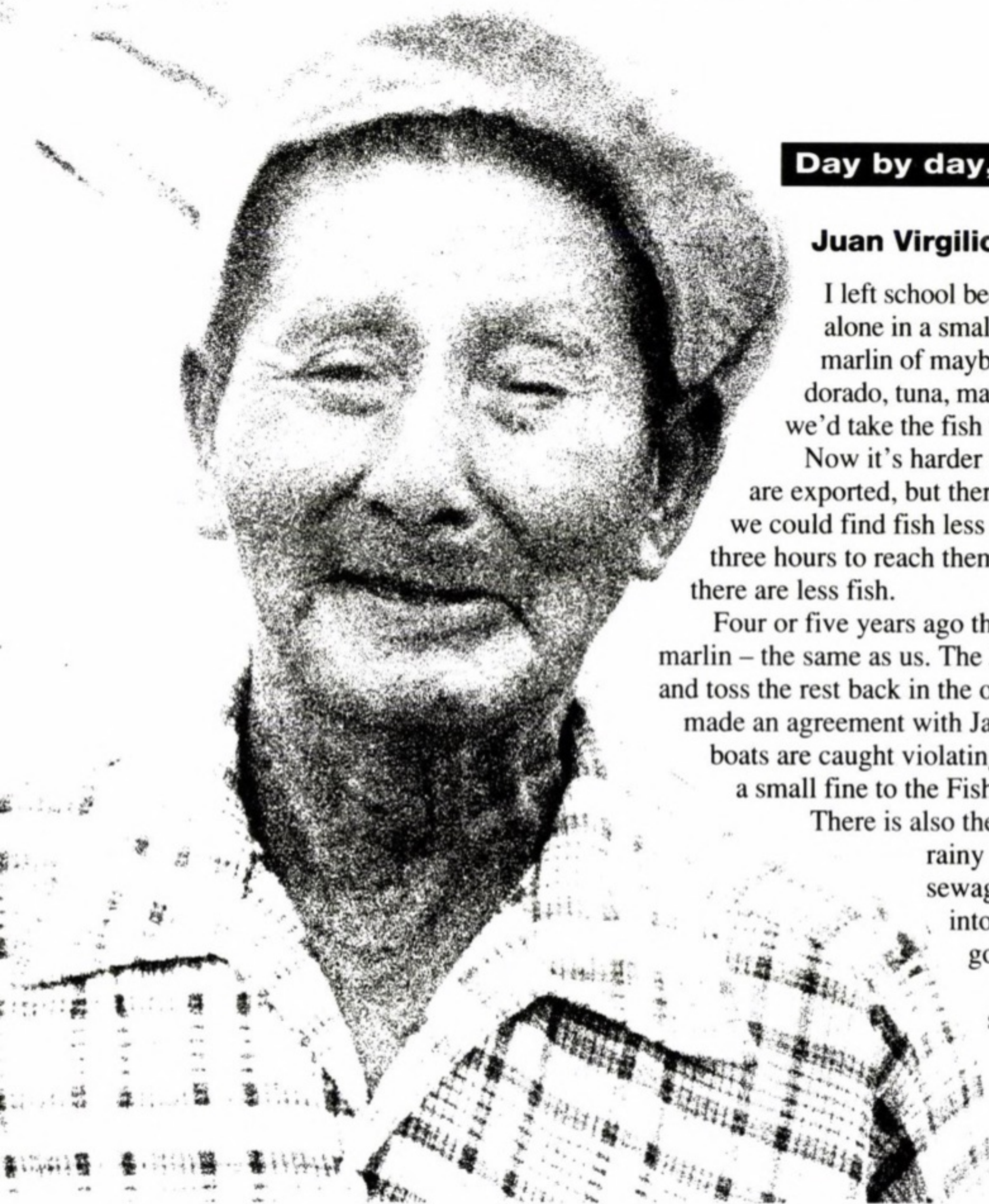
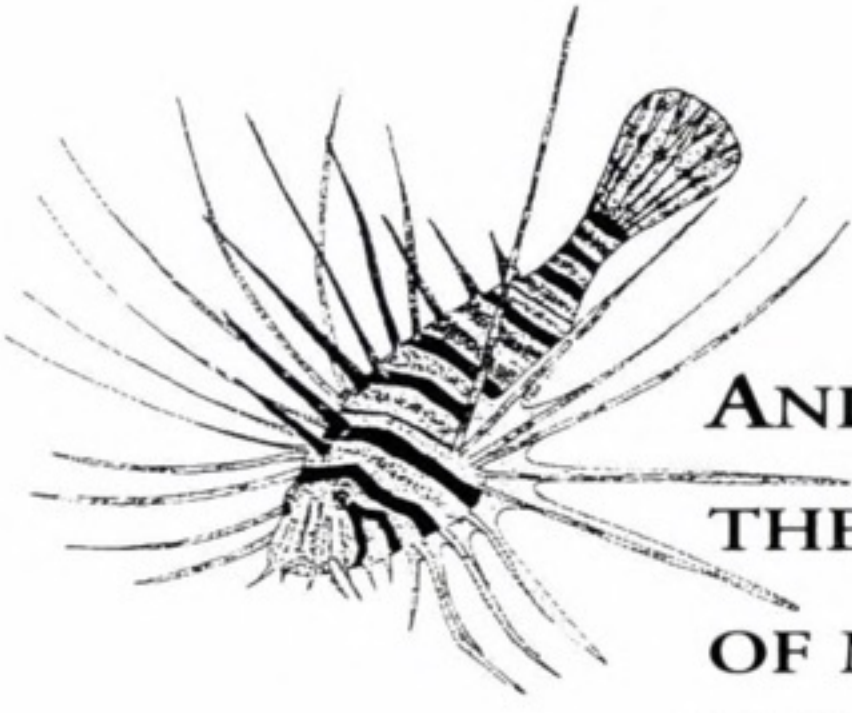




ILLUSTRATION : CHUM MCLEOD



AND I HEAR... THE SAVAGE CRIES OF
THE SEA AND THE ROUGH BACKWASH
OF MY BEING

M u k u l a K a d i m a - N z u j i

Sleepwaves and dream tides

*The sea is all around us, but there is also a sea within us. Sharon Doubiago
explores the mythology and meaning of the oceans.*

9TH SUMMER – Being dragged back by the undertow, being hit then from behind by an eight-footer, being thrown down, smashed down, ground face down into the gravel, crushed by the ton of water, ripped by the centrifugal force of flying stone, sucking shell, dark deafening crushing suffocating roar of water pulling you back to deep ocean, so wanting to breathe, to rise to the air, to see your parents' tent in the sand dune, to hear Mama's cries yes, yes, please yes coming now in the same rhythm and roar of the ocean, the full moon full tide sea that is rising over Pacific Coast Highway, over her body bringing your father's body over onto her.

11TH SUMMER – Paddling way out in the inner tube, eyes to the backs of the rolling glistening steel-green breakers folding over the land, exploding all the way up to the line of tents and trailers where Mama is telling Daddy yes and the ocean is the rocking of their bed, my brother and sister and I 'asleep' in the front of the 15-footer, this summer the blood is coming and Mama is instructing this is love, this is joy, this is pleasure, this is the miracle of life. I keep paddling out, further out than the sea-bleached surfer who takes my breath away, to see around Richard Dana's Point, north to LA, the whole coastline, the hidden beach, the secret: LAGUNA. Beach on which Gae and I were violated by her cop-diver father, smell of his semen, sea iodine.

But then the sky turns, the air suddenly colder, the water darkening to short chops. Marine is the color of fear: I've gone too far. But, Lifeguard within me, shell of balance, the castrated genital Scales of Love tread me back, exhausted, to the boys and men on the beach everywhere their taunts of rape, torture, murder, oblivion. But promise of love too, of pleasure and meaning, Mama and Daddy, yes. Sucking lifesavers to that surfer seaboy on the sand, my suntan.

I WAS conceived on Redondo Beach, in Southern California. I was born in Seaside Hospital in Long Beach. But my parents were Southerners. They pronounced 'buoy' boy. I've had the sense that *el niño* in the Pacific, or the Pacific himself, called them to its shore even before my conception.

*They told me the sound was a boy out there
telling boats how to come in through the fog.
I listened to the waves slapping him around.
I heard his crying, his lonely orphanage in the sea.
When we fished, I cast my line to him,
I was coming
to the sea when I was born,
the buoy I heard through water and storm
was a boy calling me.*¹

The coming in, the going out, the longing for the sea, the longing for the land, the yearning for the Other, the pull both ways. The water is pulled away from the earth on one side of the globe and the earth is pulled away from the water on the opposite. 'There is a gravitational attraction

between every drop of water and even the outermost star of the universe.'² Tidal, meaning time. Knowing time as this, that the water will return.

The sea is like the self — does it think? Psyche in her ebb and flow, the least graspable of our existence. Which is the Miracle: we don't know who we are. Being under the sea, liv-

ing or dead, is our condition in the universe. (What is the Gaia hypothesis?) In each wave washing in, so abundant with life, then drawing back, are Laws unknown, and unknowable, liberating. On the beach one's community (any time, any place), is put into perspective that is, proven less. The sea is not, will never be the unjust law of men — not cruel or stupid. It can't be tamed, controlled, or 'known.' Hallelujah! I shout to every wave washing out the possibility of getting stuck. I'm freest when a storm's big ones are hitting.

Where the two worlds meet in an ever-changing pattern of exchange I know the primal: relationship. I'm happy, I'm psychic, I'm turned-on, I have hope because I know the Other, which is God. Which is Birth, endless threshold. Seaweed of laminaria dilating the cervix, 'Mother-letter M (Ma): an ideogram for waves of water,'³ mare nostrum, the moment when the water washes back: the newborn on her belly, cord not cut, before breath. Do we not feel the Moon itself as our child, a part

of our missing body, torn from Earth's side by the oscillating solar tides, the massive hole filled with our human tears, milk, blood, urine, albumin, jellyfish of uterus, abalone prostate? Water doesn't 'evolve.' It's the same water since the beginning, water of every human, animal, plant, creature who's ever lived. You never know, to paraphrase James Joyce, who you're drinking.

Living on the coast causes you to know the planets' relationships to us, *Earth*, her rotation as the stars set, her loneliness in space, the pull of sun and moon on her, oscillation of her ovulations, her deaths and rebirths. You can't be linear at the beach! Knowledge of the tidal cycle is essential to your survival. You tread the shore 'line' exactly as Neruda says the ancients trod it: 'that they might recognize that touch come night, come death.' To die to the sea, to die in it, is preferable, oh, *huaca, temenos* holy! to the hands of the mob. To the traffic at intersections. Or iatrogenic, at the hands of physicians. This is why, during the Inquisition, all the women of one German town marched singing into the sea the night before the men's schedule to burn them. When the Coast Guard searches for the drowned I'm on land praying they're never found. Let me be where all the Universe bent to bring me. Let me be fish, seaweed, salt, sea.

Neap tide, ebb tide, high tide, slack water, there is more oxygen where ocean hits land than at any other place on earth. Perhaps this explains the common experience of people who first move to the coast to suddenly 'remember' their repressed pasts, their dreams. And why I fall into their sleepwaves and dreamtides. Poets notoriously need a

watery atmosphere, fog and rain, rivers and seas. Perhaps water, especially salt water, is a current, maybe electrical, like radio waves, (I don't know) that carries images, words, stories, the kind of deep thinking that motivates poetry. Souls come back in raindrops, some cultures believe, and rain comes

from the ocean, which comes from our bodies. Or perhaps the rhythm of that enormous body beats at the deep muscle tissue, the deep organs, setting off the rhythm of the human body in the way stutterers do not stutter when singing.

Like Isadora Duncan who learned her dance on the Pacific shore, I learn my craft, my poetics from studying



ILLUSTRATIONS: CHUM McLEOD

**To die to the sea, to die in it, is preferable,
oh, *huaca, temenos* holy! to the hands of
the mob. To the traffic at intersections. Or
iatrogenic, at the hands
of physicians.**

wave formations.

In *Thalassa, A Theory of Genitality*, the Freudian psychobiologist Sandor Ferenczi believes that with the drying up of the seas we were thrown up on the land, of neutral gender. The stronger of the species, in its longing to get back to the ocean, developed a penis by which to penetrate the weaker, thus simulating in coitus a return to the ocean – i.e., the womb.

Freudian, yes, because the desire to be the ocean is not the 'weaker position'. But the sea origin theory – we, Thalassians, taking the seas' place – asks a more essential question: what does it mean that in our present evolution we seem to be relying almost exclusively on technology, and, concomitantly, are destroying nature, maybe even our bodies?

SUNDAY MORNING, SEPTEMBER 20, 1987: We are walking through the Oregon dunes, wading across the mouth of the Siuslaw to North Jetty Beach three days after Daddy has finally died. And Mama is telling a story I have never heard before.

'On the Sunday before you were born we were at the beach at Point Fermin. We were in the rocks – there's a picture of this day. Two guys were out in a small boat, cutting up, just having a good time. I was getting a kick out of them, but I said something awful. "Serve them right if one of them drowned." Then it happened, maybe a wave turned them over. They were calling for help. Your father ran for help and I stood on the rocks, calling to them to hold on, help is coming. It went on all afternoon, it was terrible, terrifying. Then one let go. The other kept going under after him, kept trying to pull the drowned body out. I was depressed for days. You were born six days later, on Saturday.'

Déjà vu, my life with its ever theme of drowning and near drownings shifts slightly, a missing piece falling into place like a grain of sand from the dune we're walking. I had 'already seen' him.

Many of these drownings – in dream, writing, the psychic realm, and 'reality' – are explainable by my lifelong proximity to water, but if I listed here, with minimal description, the 'coincidental,' intertwined, life-changing, some inland, stories, most likely I would not be believed. *Déjà vu*, I pull up to a beach and become part of a drowning.



Déjà vu, I camped on a beach near Chappaquiddick the night of the infamous drowning, was tormented all night by a waking nightmare of a young woman trapped in a leaking air container out under the ocean, calling me to rescue her.⁴

At a loss for an explanation that will fit our masculine/masculinist logic we

**My experiences always lean into the sensory
- into the body itself. How do the grunion
know the highest wave? The salmon their
natal creek mouth? Are we not one body?
Does not science know this?**

label my experiences psychic, extra-sensory perception. I am at least communicating, however judged. But extra-sensory? My experiences always lean into the sensory – into the body itself. How do the grunion know the highest wave? The salmon their natal creek mouth? Are we not one body? Does not science know this? We begin to grasp that, strangely, we re-enact our childhood dramas as adults; inexplicably, I've re-enacted my prenatal experience all my life.

Was 'something' born in me that opens me to the calling from water? How many others heard and saw and felt or otherwise knew Mary Jo in 'dream' that night?⁵ Was not the water itself sending her message? Could we not have saved her if we respected this world as much as we respected the men in their spaceship on the way to the moon that same night? Would not such crimes be less? Our over-reliance on technology reduces and diminishes our naturally evolving psychic-biological evolution; we are retarded, made immoral, by our fear and hatred of Earth.

But what we could do if we turned around and embraced ourselves, Okeanus-held! From behind the wave we always swim back for the human, for our varying skin colors, tribes, cultures, geographies. For the taste of sweat, saliva, skin, semen, blood. We want tears and urine, the menstrual cycle, faeces, old-age, even death, that seed of life, the Joy of my parents' cries in our beach camps, on vacation.



OLDEST, STILL RECURRING NIGHTMARE (*mare*: the sea; *Mary*: female goddess; *mer*: to seize): We come to the bridge, the wide white modern one that goes over the ocean, my father driving, all my family in the car. Amazing! Men have actually managed to build a bridge across the Pacific Ocean!

But halfway over to Japan the bridge gives out. Too fast, too late to stop, to turn back, the deep, deepest marine rollicking careless happy sea oblivious to our fear, our folly, infinite miles from any life saver.

Sharon Doubiago is an American poet and writer. She considers the Pacific Coast, from San Diego to Seattle, her home.

1. From 'I Was Born Coming To The Sea,' from *Hard Country*, Sharon Doubiago, West End Press, 1982. 2. *The Sea Around Us*, Rachel L. Carson, Mentor Books, 1957, p.118. 3. *The Woman's Encyclopedia of Myths and Secrets*, Barbara G. Walker, Harper & Row, 1983, p.1066. 4. See 'Chappaquiddick,' in *The Book Of Seeing With One's Own Eyes*. Sharon Doubiago, Graywolf Press, 1988. 5. Mary Jo Kopechne, drowned at Chappaquiddick.

Seas and Oceans



Although the two names are often used interchangeably they are different. Seas are smaller bodies of salt water that are either landlocked or connected to the oceans by a narrow channel.

● Inland seas include the Dead Sea, the Caspian Sea and the Sea of Azov. Partially landlocked seas include the Mediterranean, the Red Sea, the Baltic and the Black Sea. Other 'seas' include Hudson's Bay, the South China Sea, the North Sea and the Sea of Japan.¹

Oceans in order of size²

	Total area (millions sq km)	Avg depth (metres)	Max depth (metres)
1. Pacific	165.4	4,200	11,524
2. Atlantic	82.2	3,600	9,560
3. Indian	73.6	4,000	9,000
4. Antarctic	35.0	-	-
5. Arctic	12.2	-	-

Why is the ocean blue?

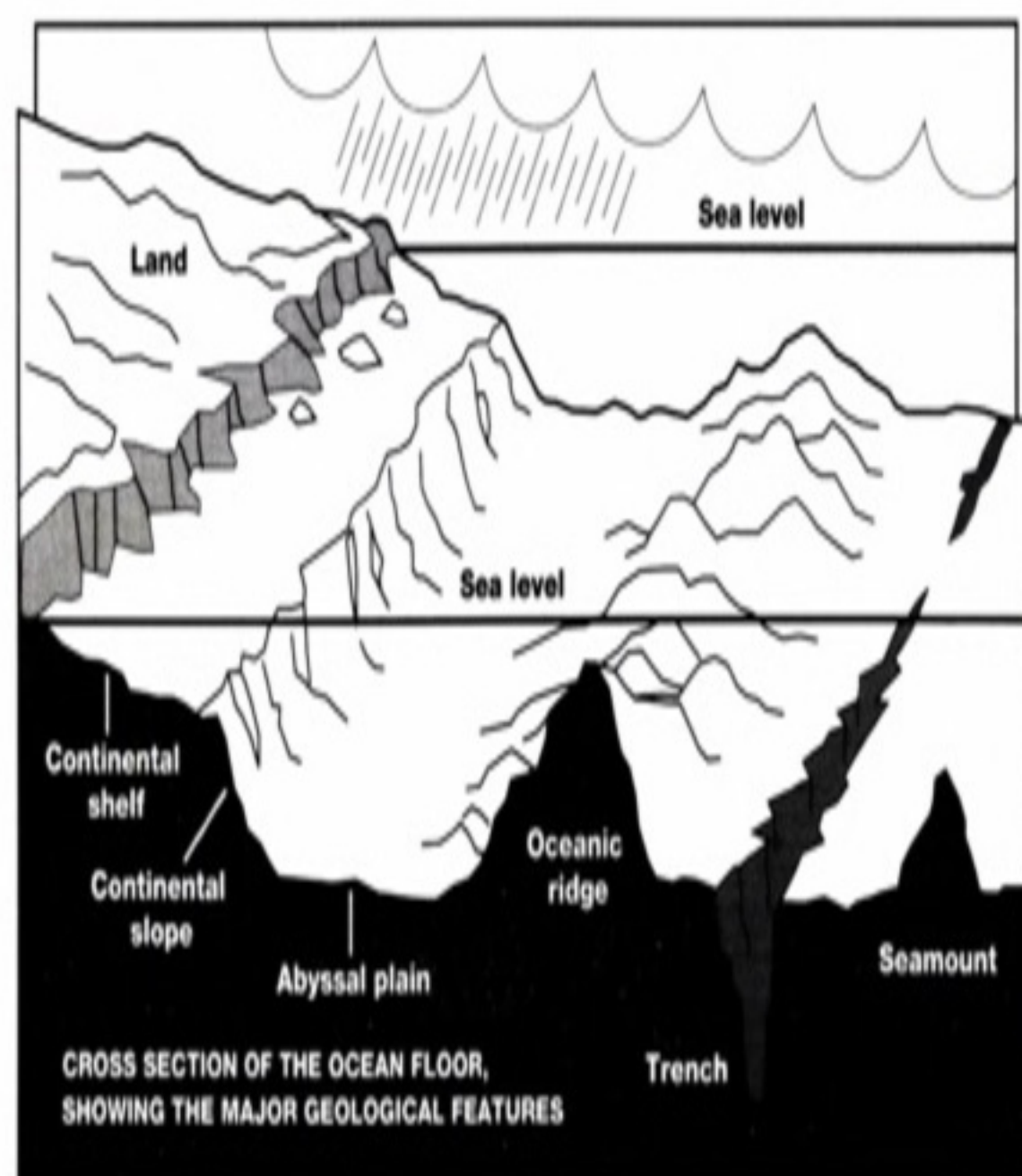
The ocean looks blue because of sunlight reflected off tiny particles in the water. The sea can also appear green (in the tropics for example) when blue mixes with yellow pigments in microscopic floating plants. The Black Sea appears black because it has little oxygen and lots of hydrogen sulphide. The Red Sea was named after the seasonal blooms of red algae that tint the surface water.³

Ridges, Trenches and Plates

The most extraordinary aspect of the ocean is its underwater topography. Much of what we know has been learned in the last 40 years and details are still sketchy. But we do know that the oceans, like the continents, sit on vast tectonic plates which are in slow but constant motion. These shifting plates have helped create the physical features of the ocean's floor - ridges, trenches, plains and undersea volcanoes.

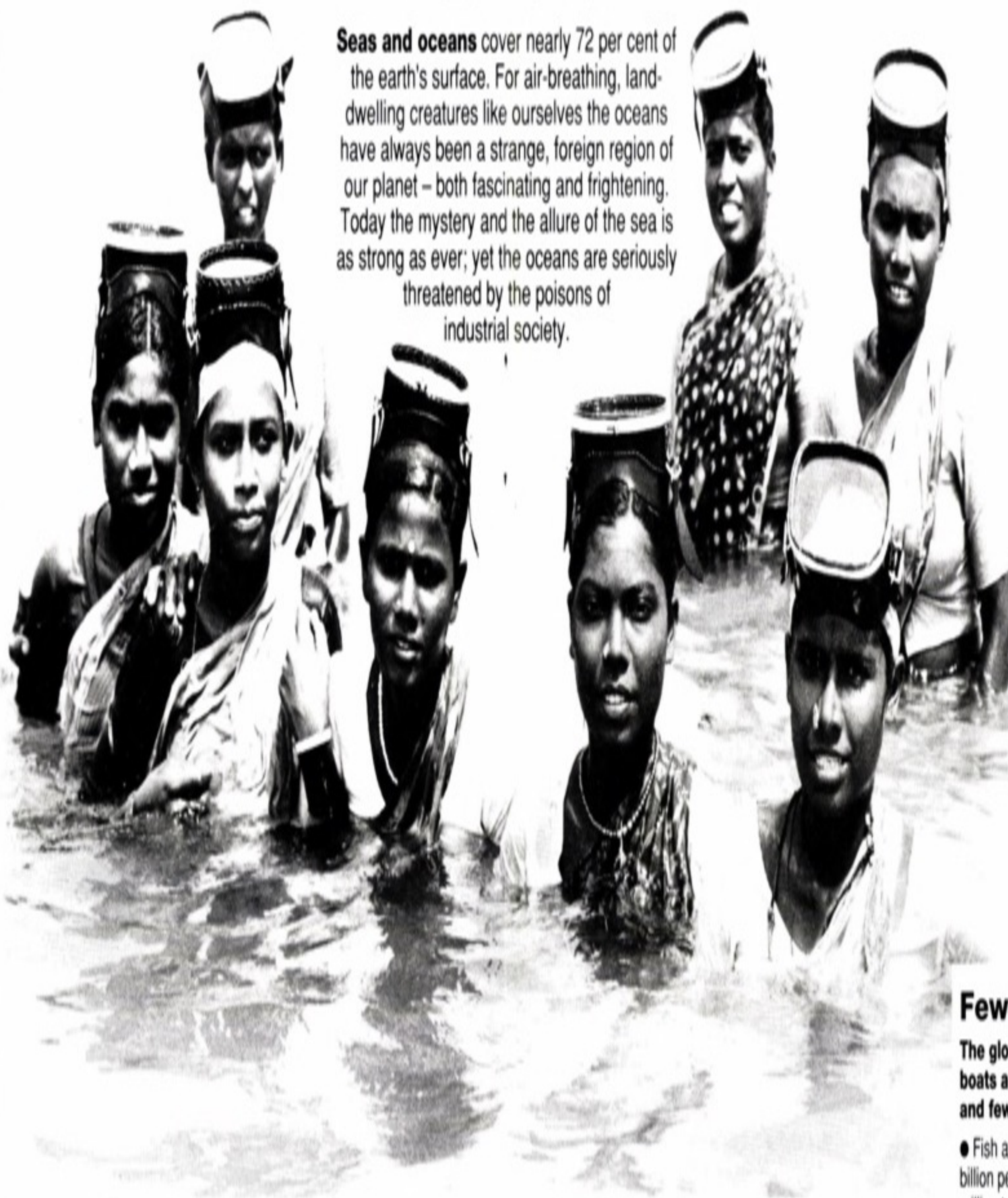
● The world's largest mountain range is in the Atlantic Ocean; its tallest peak at 8,000 metres breaks the surface to form one of the Azores islands. This mid-Atlantic ridge forms a continuous chain of mountains more than 88,000 kilometres long.²

● Colliding tectonic plates also create plunging trenches of spectacular depth. The Mindanao Trench off the southern Philippines is 11 kilometres deep. The earth's tallest mountain, Mount Everest, could be placed there and still have 1.6 kilometres of water above it.²



Blue Planet

Seas and oceans cover nearly 72 per cent of the earth's surface. For air-breathing, land-dwelling creatures like ourselves the oceans have always been a strange, foreign region of our planet - both fascinating and frightening. Today the mystery and the allure of the sea is as strong as ever; yet the oceans are seriously threatened by the poisons of industrial society.



Heat Pump

The ocean is an intimate part of global weather systems, circulating both nutrients and heat through a complex system of ocean currents.

● Cold water is denser than warm water; the constant sinking of cold water near the poles generates deep steady currents flowing towards the equator while warm water flows towards the poles. Changes in the speed or direction of these ocean currents can significantly alter global weather.



● Cold water from the poles rises in so-called 'upwelling zones' in the tropics. Deep-sea currents take about 1,000 years to travel from the equator to the pole and back again.³

● The sun evaporates about a million million tons of sea water daily which eventually falls to earth as precipitation; the sea also releases up to 10 billion tons of salt into the atmosphere annually. These salt particles act as seed crystals around which raindrops can form.³

Fewer fish

The global fishery is in serious trouble as a growing army of boats armed with sophisticated fish-finding gear pursue fewer and fewer fish.

● Fish account for more than 40% of the annual protein supply of two billion people in the Third World and developing countries produce 52 million tons yearly, over half the global production.⁴

● Almost a quarter of the total yearly catch is turned into animal feed. Chile processes 90% of its catch into fishmeal, most of which is exported to the West.⁵

● The total global catch continues to increase slightly though the catch per person has stalled. By the year 2025 a further 100 million tons of fish will be needed every year to feed a growing world population.⁶

● Most traditional food fishes are now over-exploited and stocks are falling. The North Atlantic cod fishery, once one of the world's richest fishing grounds, has been destroyed by overfishing and destructive fishing techniques.¹⁰

Habitat Destruction

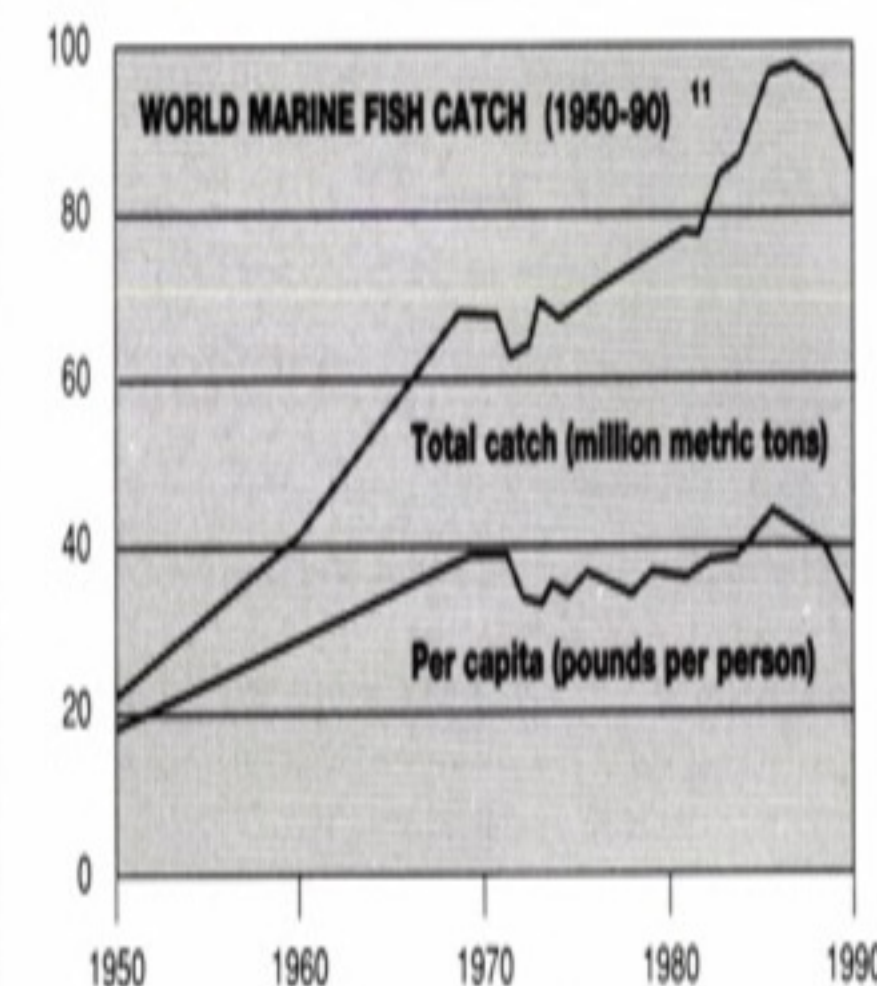
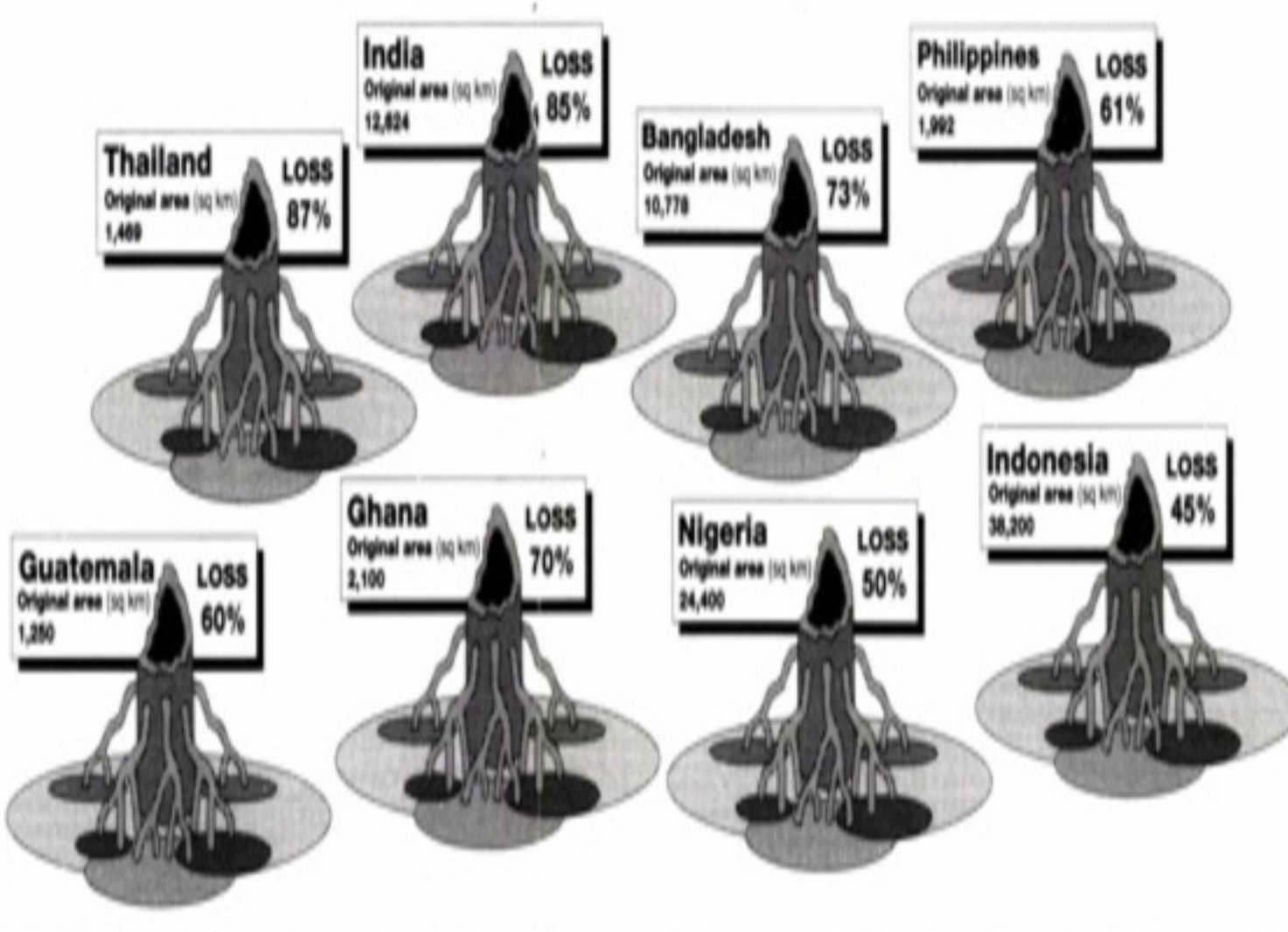
About 90% of the world's marine fish breed along the coast. Around the world the habitats that nurture ocean life are threatened by human activities.

● Shore-hugging mangrove forests are rich breeding grounds for shrimps, fish, crabs and other marine animals. Mangroves are being cut all over the Third World. Between 1963 and 1977 nearly half of India's mangroves were destroyed; 50% of Ecuador's mangroves have been cut and the land used for commercial fish ponds.⁴

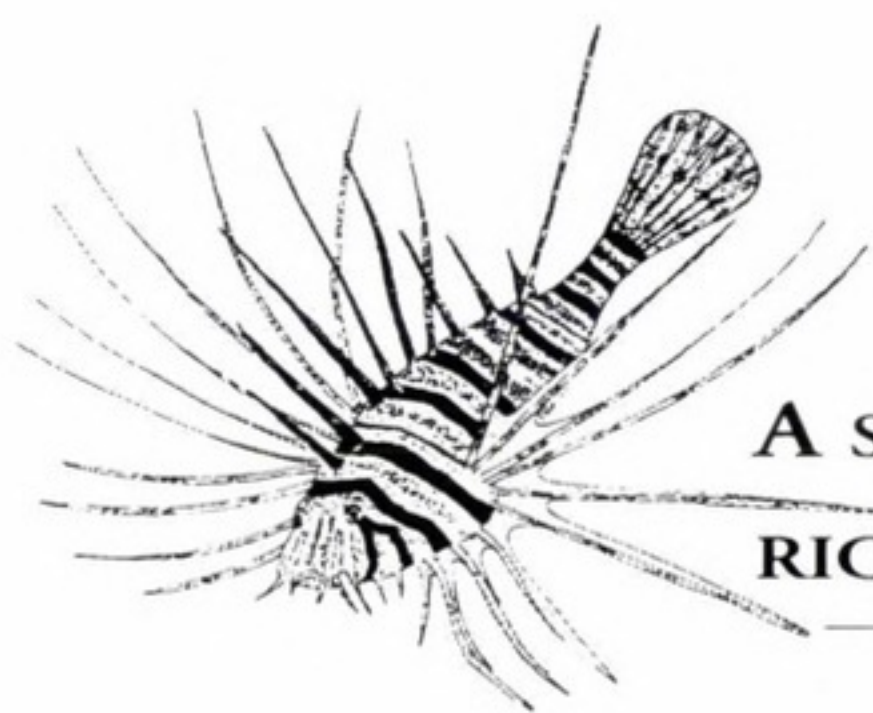
● Population pressures and industrial development have prompted Western countries to clear coastal wetlands. Italy has lost 95% of its swamps and the US has lost over half its coastal wetlands.⁵

● Coral reefs are one of the most productive marine eco-systems; one reef may support 3,000 different species. Reefs are being destroyed by sedimentation, blast fishing and coral mining. A study by the International Society for Reef Studies found seriously damaged reefs in more than 20 countries.^{6,7}

PERCENTAGE LOSS OF MANGROVE FORESTS (SELECTED COUNTRIES)⁸



1 Times Atlas of the Oceans. 2 The Oceans, A Book of Questions and Answers, Don Groves, Wiley and Sons 1989. 3 The Mysterious Oceans, Jon Erickson, Tab Books 1988. 4 The Ocean Blues, N. Lensen, from Worldwatch Reader, ed L. Brown, Norton 1991. 5 World Resources 1992-93, World Resources Institute, Oxford University Press 1992. 6 Coral Reefs, Alan White, ICLARM 1990. 7 Reefs on the Rocks, Greenpeace Magazine, July/Aug 1990. 8 Full Nets and Empty Stomachs, Third World Guide 91/92. 9 Strategy for International Research on Living Aquatic Resources Management, ICLARM, 1992. 10 The Living Ocean, B. Thorne-Miller & J. Catena, Island Press/Friends of the Earth, 1991. 11 UN Food and Agricultural Organization Statistical Yearbook, 1991.



A SEA CHANGE INTO SOMETHING
RICH AND RARE

William Shakespeare



The Blue Revolution

From salmon cages anchored in icy Norwegian fjords to prawn ponds carved out of Thailand's mangrove forests, fish farming is big business. Rick Boychuk investigates the 'blue revolution' that is changing ocean shorelines around the globe.

LIKE the Green Revolution of the 1960s, the Blue Revolution a decade later was supposed to increase global food production miraculously and stave off widespread hunger.

By 1985, the World Bank, the Asian Development Bank and a variety of other international aid agencies were pumping \$200 million a year into aquaculture projects. Mangrove forests in the Philippines, Thailand and Ecuador were chopped down to make way for shrimp ponds. Carp and tilapia farms were staked out on the flood plains of the Ganges, the Irrawaddy and the Mekong rivers.

As a result the production of pond-raised fish has boomed. Nearly 12 per cent of the annual world harvest of fish (about 100 million tons) is now generated by fish farmers. From 1975 to 1985 world aquaculture output doubled.

Commercial fish farming is now big business. The question is: has this new techno-fix to boost world food production helped to feed the hungry?

Let's look at the cultivated shrimp industry. Shrimp ponds, which now dot coastlines from Taiwan to Ecuador, are capital intensive and have led to the destruction of thousands of hectares of mangrove forests. They've also generated steady flows of polluted wastewater and contributed to the decline of wild shrimp fisheries.

In Ecuador, shrimp-pond investors

include Coca-Cola and General Foods. In Thailand, the poor living in coastal communities have taken up arms to prevent corporations from seizing commonly owned mangrove forests for shrimp ponds.

Nonetheless, the industry continues to expand. In a recent issue of *Aquaculture* magazine, El Salvador was described as the newest ideal location for intensive coastal shrimp farming. The authors of the article say the Government is offering foreign aquaculture investors a 10-year tax holiday and unrestricted repatriation of profits. In addition, a local NGO is offering to finance up to 80 per cent of the capital costs and 60 per cent of the operating costs for aquaculture projects.

'People have been killed defending their land along the coast,' says Ian Filewod of the Canadian Council for International Co-operation. The owners of the ponds tend to be businesspeople and urban investors. And the shrimp produced don't grace the dinner dishes of the hungry poor.

The compelling attraction of intensive commercial aquaculture is that it generates export revenue that can be used to pay foreign debt. In addition, it's relatively efficient: beef cattle require seven pounds of grain to produce a pound of meat. Catfish require only 1.7 pounds of grain to produce a pound of fish.

It was the Japanese who first recognized that the era of hunting fish was ending. In response, nearly a century ago, they began

to build what is today the world's largest marine aquaculture industry.

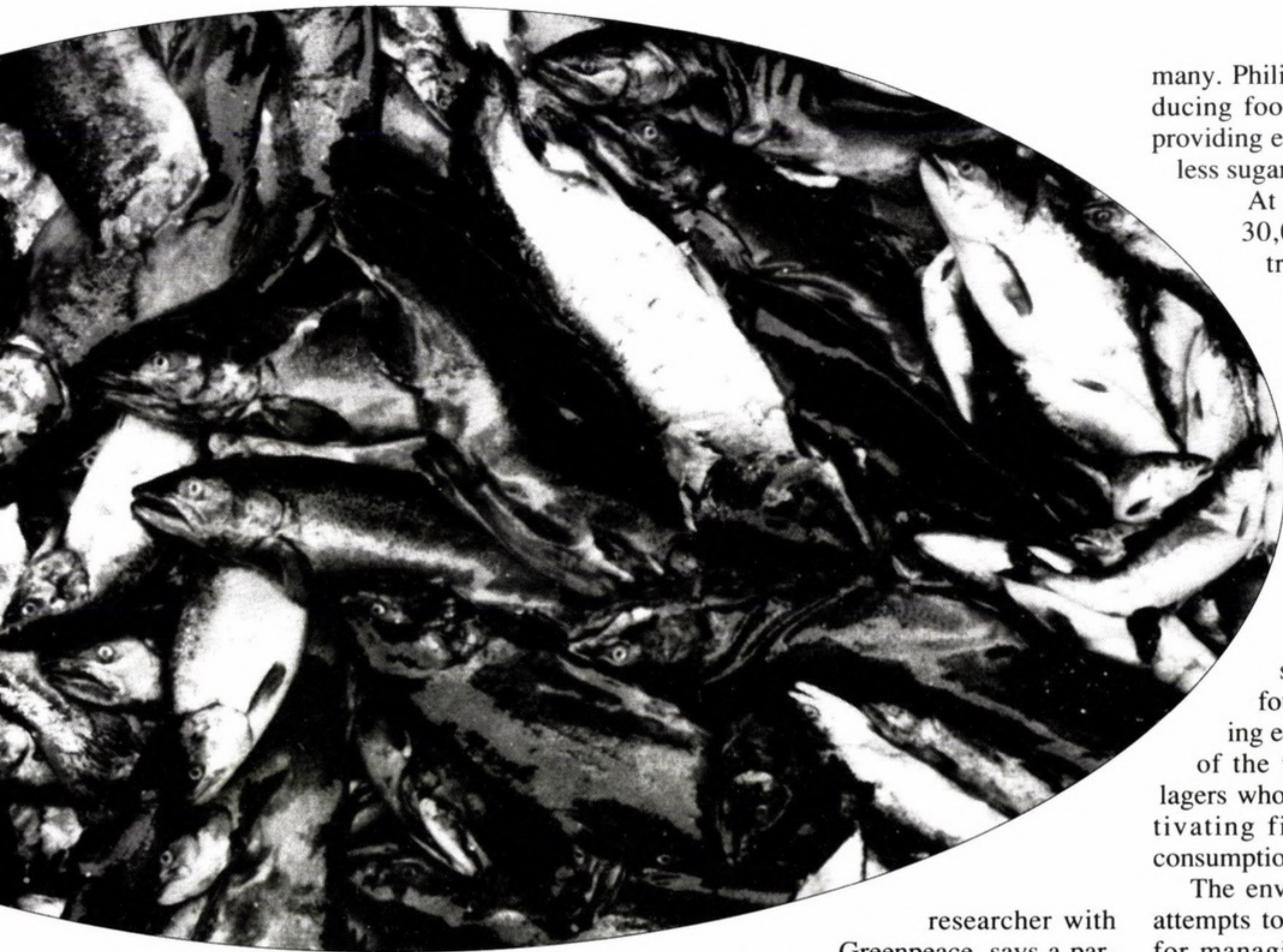
Before 1939, the Japanese were producing about 76,000 tons a year. By 1987, their production had increased to 1.1 million tons. Along their coastlines, the Japanese farm salmon, prawn, flounder, yellowtail, red sea bream and other species with high market value.

Critics believe if this kind of explosive growth occurs elsewhere the increase in the commercial fish harvest will come at the expense of both wild fish stocks and the environment. Fisheries expert Brian Davy of the International Development Research Centre says major disease and pollution problems are already emerging in Japan. Fish waste and uneaten fish food have accumulated on the sea bottom.

In some places the sludge below cage sites is more than 30 centimetres thick. The waste stifles the growth of aquatic organisms and causes water quality to deteriorate. Intensive coastal fish farming has also been linked to 'red tides' – an explosive growth of toxic algae that can kill fish and fatally poison people who eat contaminated seafood.

Brian Davy says the Japanese dealt with pollution caused by intensive farming by tossing antibiotics into the ponds. That treatment in turn led to 'increased drug resistance and concerns over excessive use of medication for a food crop.'

In the 1980s, along Canada's Pacific



coast, ITT and other corporations invested heavily in salmon farming. There are now 125 salmon operations along what is known as the Sunshine Coast. Teri Dawe of the Ocean Resources Conservation Alliance says the farms have been a disaster. Dawe says the salmon pens have triggered red-tide outbreaks and polluted the foreshore with waste and the biocides, antibiotics and other medicines used to treat the fish.

'An average salmon farm produces a volume of effluent equal to a town of 40,000 people,' says Dawe. In addition, she says, the pens frequently break and the farm-bred salmon then make their way into rivers where they force out wild salmon – a kind of genetic pollution.

'Historically, unique salmon populations have evolved in each river. They are well adapted to the conditions in their own river,' says Dawe. Genetically homogenizing the salmon makes the fish much more vulnerable to environmental change.

Dawe says the farmed salmon are also responsible for infecting wild salmon with a variety of diseases – including sea lice, which deform the fish, and bacterial kidney disease. Fish farmers normally expect losses from disease of 25 to 30 per cent. Dawe says if salmon are to be farmed they should be raised in tanks on land and all the effluent should be treated.

'I still wouldn't eat farmed salmon,' he adds, 'but if others want to, that's their business.'

Bruce McKay, a marine mammal

researcher with Greenpeace, says a parasitic fluke from a salmon hatchery in Sweden spread to Norway several years ago and has now turned up in 27 rivers.

'The entire wild salmon population in Norway is now at risk,' he warns. 'I firmly believe the success of marine aquaculture as an industry will be at the expense of existing fisheries.'

Gary Spiller, a fisheries consultant who worked for the UN Food and Agriculture Organization in Asia, says disease is common where fish farms are not closely regulated. In 1987 Taiwan became the largest prawn producer in the world. A year later disease struck and production dropped by 70 per cent. The industry never recovered. Spiller says Taiwan was just the first to crash. The Philippine prawn industry is currently suffering from disease problems and experts predict prawn farms in Thailand will be hit next.

The Brundtland Commission, which endorsed the promise of aquaculture, noted that the major constraint to expansion of the industry is science. 'Because marine biologists have not been able to get some commercial species to reproduce in captivity, fish farmers are still largely dependent on the gathering of eggs or the capture of fingerlings.'

Fisheries scientists across the globe are now working to overcome that technical barrier to expansion of the industry. Their efforts are characterized by industry supporters as a race against hunger: if natural stocks of fish are not enough to meet demand, then fish farmers will come to the rescue. That line of reasoning troubles

many. Philippine prawn farms are not producing food for the hungry, nor are they providing employment for hundreds of jobless sugar workers.

At last count there were more than 30,000 prawn farms in 40 countries. Many were carved out of mangrove swamps, which protected shorelines from erosion and were the nurseries for thousands of marine organisms.

Others were simply schemes that allowed the wealthy to privatize what had previously been a public resource used by subsistence farmers and fisherfolk. Researcher Wolfgang Harris studied two villages in Java and found that as prawn and fish farming expanded so did the landholdings of the wealthy. The losers were villagers who, for generations, had been cultivating fish in small ponds for local consumption.

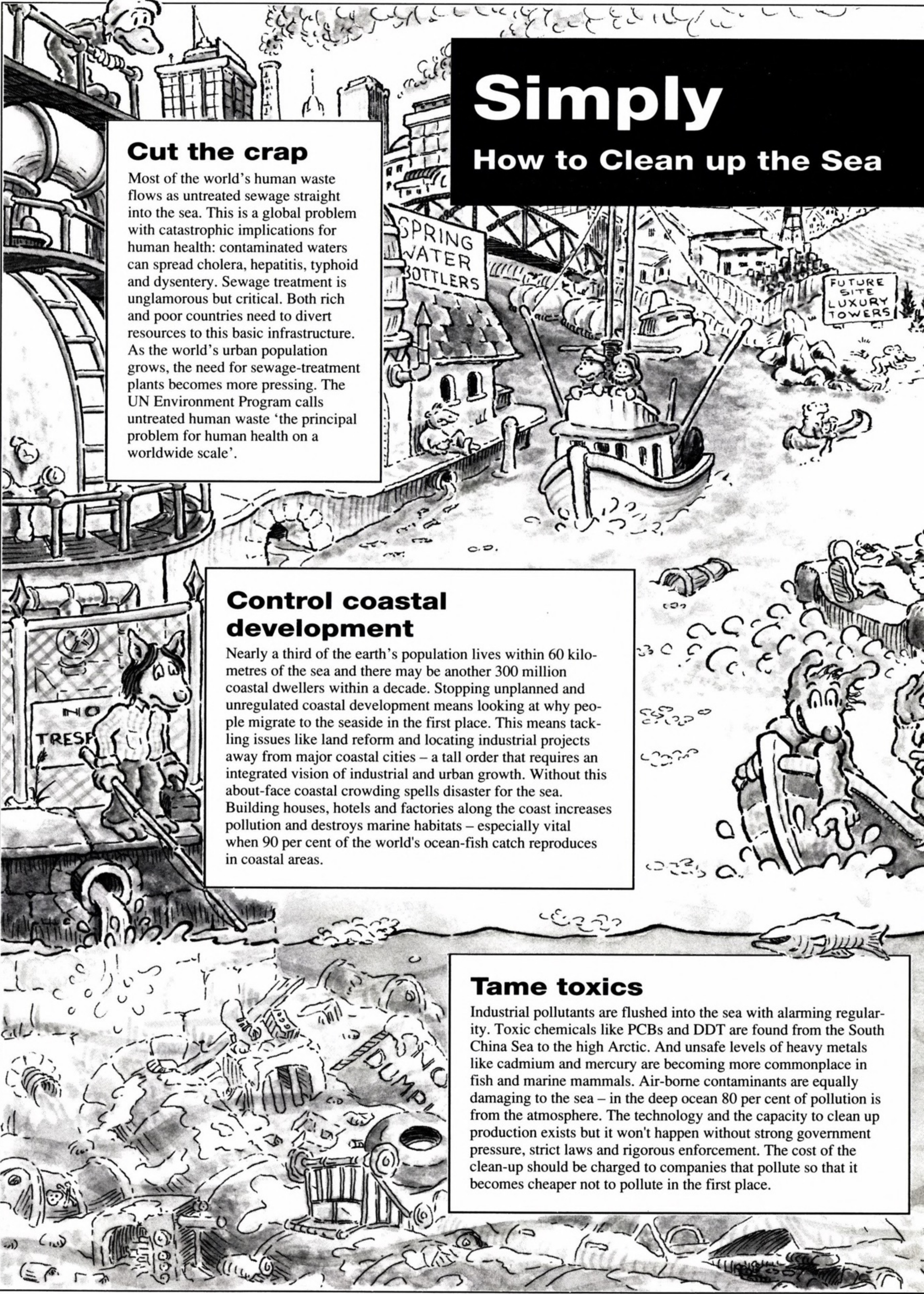
The environmental problems posed by attempts to assume nature's responsibility for managing fish stocks are even more troubling. Ray Hilborn, a biologist at the University of Washington, says there is a danger that science will provide a smoke-screen for environmental degradation. Hilborn says that along the west coast of North America fisheries managers have responded to salmon habitat loss and overfishing by developing hatcheries. Salmon eggs are harvested in the wild, hatched and then reintroduced into depleted rivers.

According to Hilborn the same tactic is now being suggested for herring, tuna, abalone and giant clams. Money that should be spent on habitat protection or restoration is instead being spent on restocking. Hilborn claims this approach both encourages careless exploitation and reduces species diversity.

Canadian fisheries scientist Jack Christie, like other aquaculture critics, believes that the real contribution to world protein needs will continue to come from wild fish and from small-scale tropical pond culture.

But he worries that expansion of coastal fish farming will damage the wild fisheries: most of the world's marine fish catch reproduces in coastal areas. And that's exactly where the environmental impact of fish farming is most acute. The Blue Revolution's promise of precious protein to feed the world's hungry appears now to be hollow rhetoric. And its enduring legacy may be the gradual but calamitous decline of wild fish stocks. ■

Rick Boychuk is an investigative journalist based in Ottawa.



Simply

How to Clean up the Sea

Cut the crap

Most of the world's human waste flows as untreated sewage straight into the sea. This is a global problem with catastrophic implications for human health: contaminated waters can spread cholera, hepatitis, typhoid and dysentery. Sewage treatment is unglamorous but critical. Both rich and poor countries need to divert resources to this basic infrastructure. As the world's urban population grows, the need for sewage-treatment plants becomes more pressing. The UN Environment Program calls untreated human waste 'the principal problem for human health on a worldwide scale'.

Control coastal development

Nearly a third of the earth's population lives within 60 kilometres of the sea and there may be another 300 million coastal dwellers within a decade. Stopping unplanned and unregulated coastal development means looking at why people migrate to the seaside in the first place. This means tackling issues like land reform and locating industrial projects away from major coastal cities – a tall order that requires an integrated vision of industrial and urban growth. Without this about-face coastal crowding spells disaster for the sea. Building houses, hotels and factories along the coast increases pollution and destroys marine habitats – especially vital when 90 per cent of the world's ocean-fish catch reproduces in coastal areas.

Tame toxics

Industrial pollutants are flushed into the sea with alarming regularity. Toxic chemicals like PCBs and DDT are found from the South China Sea to the high Arctic. And unsafe levels of heavy metals like cadmium and mercury are becoming more commonplace in fish and marine mammals. Air-borne contaminants are equally damaging to the sea – in the deep ocean 80 per cent of pollution is from the atmosphere. The technology and the capacity to clean up production exists but it won't happen without strong government pressure, strict laws and rigorous enforcement. The cost of the clean-up should be charged to companies that pollute so that it becomes cheaper not to pollute in the first place.

The ocean is now the ultimate repository of humanity's waste and it is becoming filthier by the month. Here's a brief NI guide to cleaning up the mess.

Watch the watersheds

Forests – Governments need to stop deforestation of fragile watersheds. As forest cover is destroyed the land holds less rainfall, soil is eroded and sediments rush to the sea. Coastal habitats like coral reefs and seagrasses are smothered and the sea creatures that live there are wiped out.

Farming – Deadly agrochemicals flow into the sea from rivers and creeks draining inland areas. Nitrogen and phosphorus overfertilize coastal waters, sparking massive algal 'blooms'. The algae absorb oxygen as they decay, leaving the water lifeless and foetid. Farmers should be financially encouraged by governments and aid agencies to wean themselves from dependence on oil-based chemicals – and to re-introduce environmentally-safe pest control. The export of hazardous pesticides banned in the West (like DDT and the dioxin-laden 2,4,5-D) should be banned.

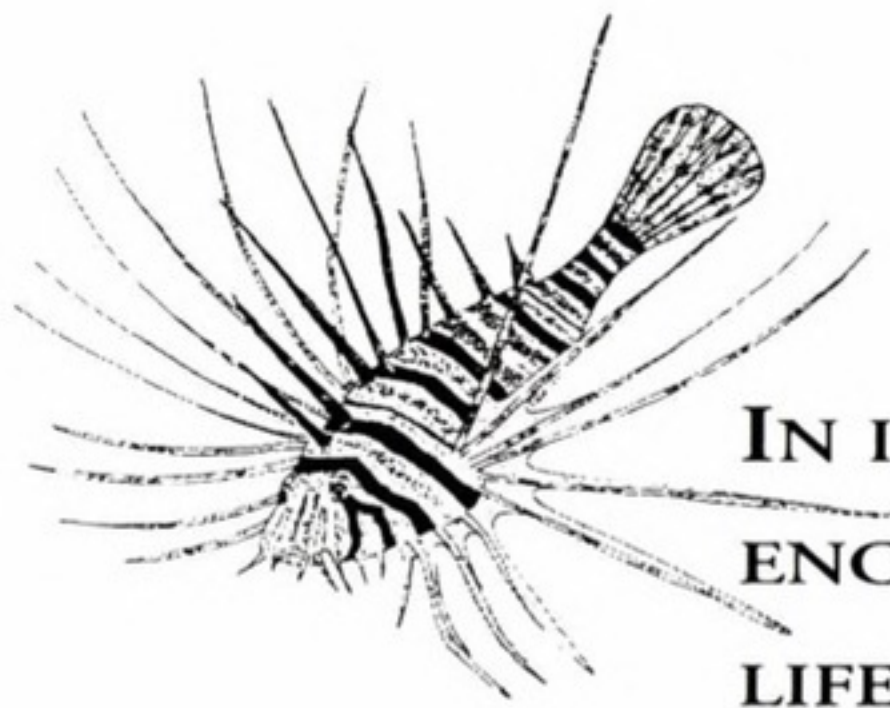
Ban dumping

The deliberate dumping of garbage, sewage sludge and industrial waste into the sea was commonplace until public outrage forced 65 nations to adopt the London Dumping Convention in 1990. The agreement prohibits dumping of radioactive and toxic waste; participants have also agreed to stop all industrial dumping by 1995. Dumping of sewage sludge and dredged silt from ports and harbors (loaded with heavy metals) should also be prohibited. It can be done. New York City, which dumps 5.3 million tons a year of sewage sludge into the Atlantic, has agreed to stop dumping in June this year. Countries that have refused to ratify the London agreement should be pressured to do so urgently by signatory nations – using economic carrots or sticks as necessary.

Police petroleum

Most of the 600,000 tons of oil entering the ocean every year is dumped illegally from ships routinely cleaning their bilges or washing out their tanks. As a result oil slicks and tar balls coat beaches; thousands of shellfish, sea turtles and other marine creatures fall victim yearly to this new 'black death'. National governments have the power to confiscate ships and levy stiff fines. Where this is not possible oil-importing and oil-exporting nations should assume responsibility for prosecuting violators. In addition, hundreds of colossal oil tankers lumber through the world's oceans every day – disasters waiting to happen. This may be inevitable as long as our oil addiction continues. A shift to locally based alternative-energy sources is the best way to stop the movement of billions of tons of poisonous petroleum around the globe.

•ARR 1992•



IN ITS MYSTERIOUS PAST (THE SEA)
ENCOMPASSES ALL THE DIM ORIGINS OF
LIFE AND RECEIVES IN THE END...
AFTER MANY TRANSMUTATIONS, THE
DEAD HUSKS OF THAT SAME LIFE

Rachel Carson

Toxic tides and toilet wastes

On-the-spot reports from British Columbia, Manila and Sydney on the slow poisoning of the coastal seas.

LIVE on Gabriola, one of British Columbia's Gulf Islands. The island is heavily wooded and largely undeveloped. The people are friendly and easy-going. And we're close enough to the city of Nanaimo for convenience, far enough away for privacy. But not everything is perfect – as I remember each time the wind blows from the south-west.

That's when the rotten-egg stench reminds me that I live in the plume of Macmillan Bloedel's Harmac pulp mill – a toxic cloud of noxious gases pouring from the belly of the region's largest employer. 'It's the smell of money,' old-timers used to say in pulp towns like Nanaimo. Today it's the smell of cancer. On quiet nights I can hear the mill in the distance, its metallic clanking and dull mechanical rumble. Shining across the calm waters of Northumberland Channel, it looks almost pretty – but the twinkling coloured lights hide an ugly reality.

Georgia Strait stretches 220 kilometres between Vancouver Island and the British Columbia (BC) mainland. It's ringed by almost two million human inhabitants and includes hundreds of islands, shores and tidal passages. Fresh water and nutrients pour in from the Fraser River, where a rich estuary provides a wintering ground for birds from three continents.

Home to 1,100 species ranging from seaweeds and molluscs to whales and sea lions, the Strait was always a sumptuous larder for the native Salish people. In this century it has supported a vital fishing industry – including the prized sockeye salmon. And more recently this inland sea has formed

The smell of money

the backbone of the area's tourist industry.

Now, as the magnificent coastal forests of British Columbia are felled to feed the world's paper appetite and sensitive estuaries are paved over to build shopping centres, the Strait's rich but fragile ecology is in danger of collapse. Long used as a garbage dump (almost five million litres of

toxic waste per minute flows into the Strait) this area of the Pacific is rapidly reaching its saturation point. At least 650 kilometres of BC's coastline have been closed to shellfishing because of sewage contamination.

But the pulp mills have been the worst offenders – with the quiet assistance of the provincial government, which has rarely enforced its already weak regulations. Mills are occasionally fined for spills, but not for daily infractions. They spew tons of dioxins, furans and other organochlorines (by-products of the chlorine bleaching process) into the Strait every day. Dioxins (identified by the US Environmental Protection Agency as 'by far the most toxic chemical known') have been linked to cancers, genetic damage and immune-system suppression.

Still, many industry leaders refuse to acknowledge there is a problem. Ian Donald, former head of Fletcher Challenge Canada, maintains there is no proof that chlorine bleaching is bad for the environment. 'People aren't dropping dead in the streets,' he told one journalist. 'If they were, we'd have to act.'

Yet the mills are having a devastating impact on people's lives and livelihoods. Commercial shellfish growers describe pollution from the mills as a 'creeping Chernobyl'. But no-one has been hit as hard as BC's native people, who have traditionally depended on shellfish for both work and food – many native communities are now unable to eat or sell their catch. Chief Gene Louie of the Sliammon people, just north of the



Pulp mills are destroying the fragile ecology of the British Columbia coast.

Powell River pulp mill, says one-sixth of his community is out of work. 'They take all the profits from our country and leave us poisoned beaches.'

A change may be in the works. The province's Environment Minister recently announced his intention to cut organochlorine discharge significantly and ban it completely by 2002. But it remains to be seen if BC's new government can rein in the powerful pulp industry. After all, these are the same executives who, two years ago, were able to overturn a provincial Cabinet decision to limit organochlorine discharges with a casual phone call to the then-Premier of the province. ■

by Laurie MacBride

For further information contact: **Save Georgia Strait Alliance, Box 122, Gabriola Island, BC, V0R 1X0. Tel: 604 247-8670. Fax: 604 247-8655.**

Down by the bay

LONG before you see the Pasig River you can smell it; the black water releases a foul stench which hangs like an invisible cloud in the heavy Manila air. The river cuts a dark swathe through the heart of the Philippines' congested capital, eventually dumping its load of plastic, wood, animal carcasses, faeces and dissolved chemicals into Manila Bay.

'I remember my grandfather telling stories of rich fishing in the Pasig,' muses Joe Ordonez, Chief Biologist at the Philippine Fisheries Bureau. 'It was clean, you could wash your clothes in it.' Today the river is biologically dead. According to the Environment Ministry the level of dissolved oxygen at the mouth of the river, and for six kilometres upstream, is zero.

The Pasig – like the other rivers that drain into Manila Bay – is little more than a conduit for channelling toxic wastes to the sea. Gladys Hingco, a researcher with the Tambuyog Development Centre, has written a comprehensive report on the state of Manila Bay. She says there are 100 industries along the Pasig that discharge their waste directly into the river.

'The Philippines has one of the most comprehensive environment laws in the region,' she notes. 'But in practice there is no monitoring and no enforcement – industries can do what they please.'

And they do – despite growing protests

from those who depend on Manila Bay for their livelihood. Groups like the Alliance of Fisherfolk to Save the Fisheries in Navotas (just outside Manila) have demonstrated outside polluting factories. But according to the Alliance's Eden Pascual, 'we get no response from government agencies; in fact most of our protests are met by police and tear gas'.

Many people who live along Manila Bay are already suffering from the poisons being dumped into the sea. Concentrations of heavy metals in fish from the Bay are 10 to 16 times the safe levels set by the World Health Organization (WHO) – these metals can damage the kidney and liver and cause congenital diseases in babies.

The other critical problem is human sewage, almost all of which is flushed, untreated, directly into the Bay. More than 85 per cent of the households in the Manila area have no sewage treatment. As a result pathogenic bacteria swarm in the warm waters of Manila Bay: the faecal-coliform count comes in at an astounding 11,000 times the WHO limit. Yet this water is used routinely for bathing and washing.

In small communities like Saint Roque, near Navotas, dozens of children gingerly pick their way across a garbage-strewn strand to cool off in the sea. Nearby, one-room wooden houses are perched on stilts over the beach; toilet wastes drop directly into the waters below.

Romeo Capang, a member of the Saint Roque Fishworkers' Co-operative, is meticulously repairing a nylon hand net, stitching quickly and effortlessly.



Garbage covers the sand along Manila Bay.

'My children are often sick,' says Romeo, 'sometimes with sore stomachs or bad ears. Look at my son Rodelio. He is 11, but he is so small, like a seven-year-old.'

Poor fisherfolk like Romeo Capang are among those worst hit by the despoilation of Manila Bay. In a good month he can make \$40, barely enough to buy rice for his family twice a day. The 200,000 Filipinos along the Bay who depend on fishing for a living earn less than one-seventh of the government-defined poverty level.

'If there are no fish, there is no money,' shrugs Romeo. 'In the Philippines it seems if you're rich you get richer, if you're poor, you get poorer.' ■

by Wayne Ellwood

Dirty surf

THE surfer, bronzed and athletic, turns his head to the still-rising sun and nods in approval. In Australia tide and air pressure have produced some classic waves. But as he connects his leg rope there is one more check to be made. How bad is the sewage today? Faecal coliform contamination has turned the Sydney coastline into a toxic playground. And sewage dumped into the sea has created a deadly home for a wide range of marine life.

According to Wollongong University's Sharon Beder contamination is widespread. Pilot studies of oysters show accumulated levels of chlordane, copper, arsenic and selenium above National Health and Medical Research Council limits. Fully 66 per cent of cod failed to pass government standards for mercury, while 63 per cent of crabs and 30 per cent of prawns failed both the copper and cadmium standards.

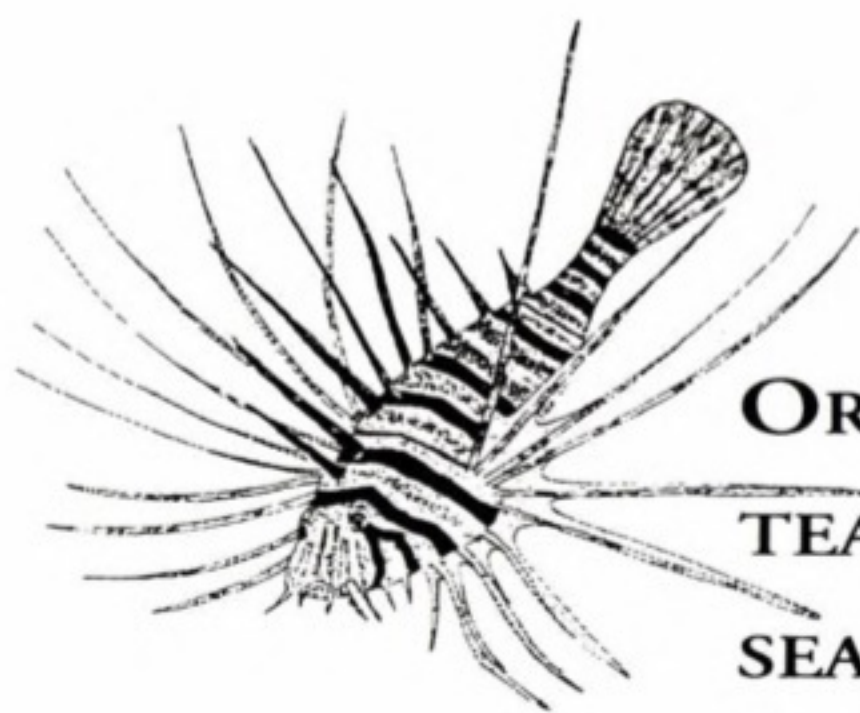
A government-established pollution monitoring body is supposed to warn Sydney's beachgoers on the dangers of taking a dip. But the group's 50-per-cent failure rate in predicting harmful pollution has not exactly won public confidence. Respiratory problems as well as ear, nose and throat infections are now common for regular swimmers.

The state government has chosen a range of 'new' technologies to solve Sydney's sewage problems which do little to improve the primary sewage treatment now in place. These include dissolved air flotation, chemically assisted sedimentation and magnetite. The latter two are especially poor at removing toxic materials and grease. In general, these technologies are 20-30 per cent less effective than secondary treatment. All three use chemicals which may themselves be pollutants.

In addition, hundreds of tons of heavy metals are being discharged into the ocean. One of Sydney's sewage-treatment plants alone receives more than 400 tons a year, including six tons of arsenic, 47 tons of chromium, 26 tons of lead, and a ton each of cadmium and mercury.

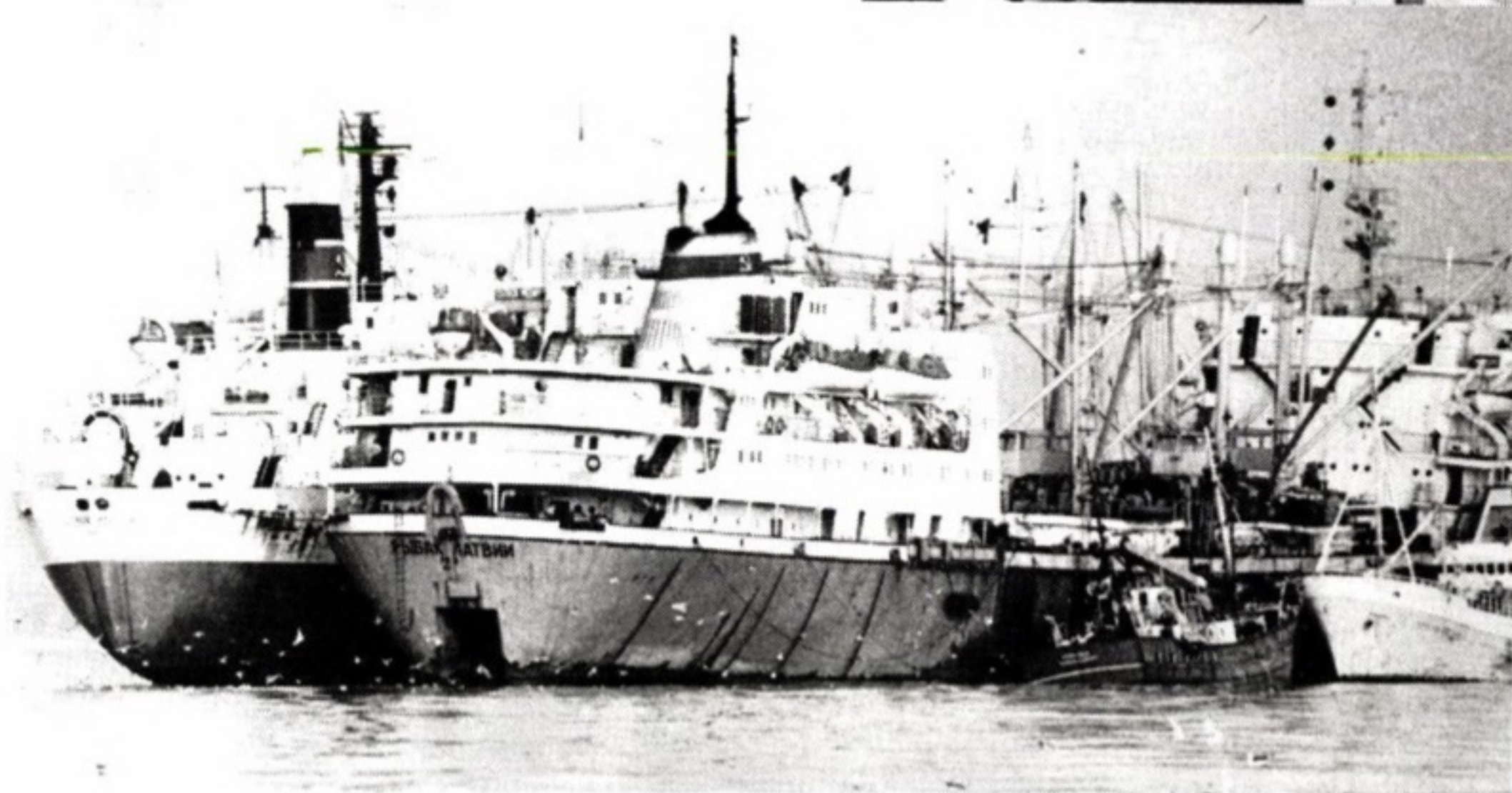
The presence of organochlorines is also worryingly high. For example, the giant chemical company ICI is still permitted to dump hexachlorobenzene into the sewers. 'Less toxic' compounds like these can still be discharged after negotiation with government officials. And if a problem still remains, then they can just pay a fine – a very affordable \$40 per kilogram. A small price to pay for a clear conscience – but much too high a cost for Sydney's ever filthier ocean. ■

by George Fisher



OR SPEAK OF THE EARTH, AND IT SHALL
TEACH THEE; AND THE FISHES OF THE
SEA SHALL DECLARE UNTO THEE

Book of Job



Russian factory ships (left) take on fish for processing from small British vessels while Chinese crew members (right) hose down the day's catch.

Vacuuming the oceans

You can't treat the natural world like an economic equation and get away with it — not for long anyway. James Carr and Kieran Mulvaney chart the rise and fall of industrial fishing.

'HALFWAY to the horizon on our port side is a Russian ship, close to 300 feet in length overall... Ships are all around us, near and far. I count some 33, it is a sight to see: a floating metropolis, a city at sea... How any fish can escape the hidden eyes of this armada, since every ship in the fleet is equipped with multiple underwater electronic fish-finders, is difficult to imagine.¹

This is the face of much of the commercial fishing industry today. The traditional image — of a few people in a small boat battling hard weather as they fish in coastal waters — is now largely outdated. Today, factory fishing fleets swarm over the ocean, from the coasts to the depths of the high seas, vacuuming up ever-increasing amounts of the world's marine resources.

The UN Food and Agriculture

Organization (FAO) confirms the enormous growth in the size of commercial fisheries over the last 40 years. From a figure of 20 million tons in 1950, the total catch from commercial fisheries doubled to 40 million tons in 1960; by 1990 it had reached 100 million tons. But this growth has been far from steady. Instead, many fisheries have followed a 'boom and bust' pattern, with too many huge vessels crammed with state-of-the-art fish-finding technology being built to exploit limited fish stocks.

The result? A cycle of self-destructive exploitation. Rising prices for fish lead to more intense fishing and dwindling stocks, and this gives rise to still higher prices, and thus even more intense exploitation.

The inevitable consequence has been a spectacular collapse of many major fish

stocks. For example, the maximum catch ever taken of mackerel in the North Sea — one million tons in 1967 — meant that the size of the mackerel stock fell by 1970 to about one-tenth of its original level. The Norwegian stock of spring-spawning herring collapsed from a total 10 million tons in the 1950s to virtually zero in 1970. Similarly, a period of intense exploitation of anchoveta stocks off Peru in the early 1970s caused a collapse in the stock and, in 1977, a temporary ban on fishing.²

As these stocks diminished, Northern fishing nations like Canada, Japan and the US began increasing and improving their distant-water fishing fleets. The construction of larger, longer-range vessels — particularly giant factory-freezer trawlers and purse-seiners — enabled ships to move further afield, mostly into Southern waters



where stocks were not as heavily fished.

In response to the obvious dangers this presented, the UN Law of the Sea provided for the extension of national jurisdiction over coastal waters. The Convention itself was opened for signature in 1982, but many coastal states enacted national legislation prior to that on the basis of an agreed draft text. This resulted in the establishment, from 1977 onwards, of 200-mile Exclusive Economic Zones. The idea was that empowering coastal states to assume control of the exploitation of their waters would provide them with a logical incentive to ensure that fish stocks and other marine resources in these waters were properly conserved and managed for their own long-term interest.

But in return for the extension of such national control, coastal states are obliged to provide other nations with access to 'surplus stocks' of fish – the portions which are deemed to be sustainably exploitable, but which the coastal states themselves do not have the capacity to harvest.

Anxious to earn hard currency to service their national debt, the governments of many Third World coastal nations decided to sell the right to fish in their waters to high-tech, foreign factory fleets. At the same time, many Southern countries also acquired their own 'modernized' fleets. With this enormous increase in fishing capacity it was only a matter of time before over-fishing began to chip away at fish stocks in Southern seas. The potential for total collapse was obvious.

Much of this fisheries 'development' in

the South is the result of foreign aid. Fishing infrastructure (new wharfs, freezer plants and processing ports for example) is being promoted by the Asian Development Bank and by the FAO. The European Community and countries like Japan, the US and Norway are also getting in on the act. The rationale for these 'development' programmes is that increased fish production will help local economies by providing more jobs and more food. In fact, this super-efficient factory fishing does nothing of the kind. Instead it worsens the drain of resources from North to South: more fish from Third World waters winds up on the dinner tables and in the livestock feedlots of the North.

The maritime state of Kerala on the south-west tip of India is a classic example of this process.³ From the mid-1950s to the mid-1960s, most of the effort to boost fish harvests in Kerala was centred around helping small 'artisanal' fisherfolk use their traditional non-mechanized craft and a wide array of fishing gear and tackle. The focus worked: the overall fish harvest, especially the harvest of prawns, increased substantially. Then in the mid-1960s the international market for prawns suddenly took off. And fisheries 'development' in the waters off Kerala shifted accordingly; the main goal became increasing the prawn harvest to earn precious foreign exchange. The fishery was soon dominated by outside investors; small trawlers replaced the hand-rowed boats and traditional equipment of 'artisanal' fisherfolk.

For a decade all seemed fine. Then

catches started to fall and by 1979 the once-rich waters off Kerala were showing all the signs of overfishing. An ecological crisis was in the works. The income and productivity of both small and larger-scale fisherfolk plummeted. More alarmingly still, villagers all over this traditionally fish-eating region began to go hungry. Fish disappeared from the markets and prices shot up beyond the reach of local people.

This depressing pattern – fisheries 'development' leading to increased exports and decreased local consumption – has been repeated again and again across the Third World, from the South Pacific to West Africa. And there are few signs this trend will change soon. Third World nations are being forced by powerful agencies like the World Bank and the International Monetary Fund to 'pay their way' by exporting even more of their natural resources.

The fact is that much of the fish exported from the South ends up feeding not people, but animals. Only two-thirds of the global fish catch is consumed directly: the rest is converted into fish meal (to feed cattle, chickens and, ironically, pen-reared fish) and into fertilizer. In Thailand, the amount of fish processed into animal food increased by 25 per cent from 680,000 to 910,000 tons in the space of a decade.⁴

The major problem with factory fishing is that there is so far no effective way of controlling it. As well as depleting the once-fabulous bounty of the sea, the modern industrial fishing fleet contributes to a scandalous waste of resources in a world where all too many people go hungry.

How to resolve the problem? Restrictions and quotas are a start but they usually have the effect of shifting the problem elsewhere. Instead of runaway competition there needs to be greater co-ordination and co-operation by strengthening regional fisheries bodies. The size of the global fish catch and the now-common use of high-tech, destructive technologies must be brought into line with the imperatives of ecological sustainability.

Unless this happens soon marine fish harvests around the world will continue to dwindle. The future of the ocean ecosystem with its myriad interdependent species may be at stake. And what is now heralded as the 'last frontier' may become the 'lost frontier'.

James Carr and **Kieran Mulvaney** work for Greenpeace International in Amsterdam.

¹ William A Warner, *Distant Water: the fate of the North Atlantic fisherman*, Little, Brown & Co, Boston, 1977. ² G Seders et al, *World Marine Fisheries Under the Exclusive Economic Zone Regime*, Lisbon, 1989. ³ See J Kurien and TR Thankappan Achari, *On Ruining the Commons and the Commoner: the political economy of overfishing*, Centre for Development Studies, Ullloor. ⁴ E Laureti, *Fish and fishery products: world apparent consumption statistics based on food balance sheets (1975-1986)*, FAO, Rome 1990.

The squid, the cod and who we are

Ray Rogers argues that the decline of Canada's Atlantic fishery is linked to our overall relationship with the natural world.

I WAS at the gas station near my home in Little Harbour, Nova Scotia when Vernon Murphy told me about the time he was fishing out on the edge of Roseway Bank with Hal Harding.

'I was just a kid, maybe 14 or 15,' Vern recalled. 'We had hauled our nets on the way out to the bank, and we got a couple of hundred pounds of herring, enough to bait out five or six tubs of gear.'

'By and by, I managed to get a bucket full of squid and I chopped them up and baited nearly a tub of gear on it. We were hauling along on the herring the next morning and we weren't getting a thing. Then we came to the squid I'd baited on and the line was smother white. There was a steak cod as big as a man on every hook as far down as you could see.'

'Hal sunk the gaf into one of those steakers and rolled him up on the rail – its head the size of a wheel rim. He looked back at me with a glint in his eye and said, "It's moments like this, I know who I am."'

* * *

Canada's Atlantic fishery has changed dramatically since Vern Murphy described that scene from his childhood nearly 40 years ago. Yet the issue of 'who we are'

has become even more urgent.

I've lived by 'longline fishing'¹ for the last 12 years. Over that time I've come to see both the fishing industry and the community in which I live threatened. People blame the seals or the foreigners for the decline of fish stocks. But I'd say the cause was much deeper than that: the end of what was one of the world's richest fisheries stems more from how we as humans relate to the natural world, to the sea and the creatures that live there.

* * *

Most people who depend on the sea in Nova Scotia practise small-scale 'in-shore' fishing. But the 'dragger fleet' is a different story. These expensive trawlers are packed with sophisticated fish-finding technology. They can travel long distances to reach the fish and they don't need to worry about the weather. They can carry large supplies of food and fuel and tie up in the port nearest the fish. The Canadian 'dragger fleet' now has five times the capacity required to catch its annual quota.

As one of my friends in Little Harbour lamented: 'Ten years ago, I used to swamp load my old boat. Now there's nothing to go for. With these new draggers, all we've

done is gear up for disaster. The ocean can't take it. Just look at one of those big draggers come in loaded with 100,000 pounds of twelve-inch long haddock. How long can the stocks take that?'

The noted environmentalist and writer Farley Mowat says this high-tech fishing for profit is 'a financial vortex' which has destroyed the fishery. And I believe he is right. Bigger ships and higher technology take more investment and that means bigger catches and bigger profits until, as Mowat writes, 'it spirals and you reach the point of no return'.

The earth was not designed to provide stock shareholders with a healthy return on their investment. Trees, fish and whales grow at around five or six per cent a year. In order to compete with the rest of the economy and provide a ten-per-cent return on investment, resource industries like fishing and forestry systematically deplete living natural communities.

Our culture has been taken over by a mindless drive for affluence and growth. In the process we've distorted our relationship with the natural world. The destruction of the fish stocks off Canada's East Coast is just one example of modern society's brinkmanship with environmental limits as we pursue our goal of ever-expanding consumerism.

If the much-ballyhooed concept of 'sustainable development' is to have any real meaning we are going to have to build a new relationship between ourselves and the natural world. And we are going to have to seriously rethink what we mean by 'community': in this sense there is a lot we can learn from the natural world.

Consider the basic ecological principle of 'interconnectedness' which says that no one aspect of a natural community is more important than another. This idea is a direct challenge to two cornerstone beliefs of modern society – private property and individual freedom. And that's what makes many environmental problems so daunting; they go right to the heart of the ways we understand ourselves as a society.

Human beings caught in the web of industrial culture have become a predatory species who have lost a sense of belonging anywhere. The painful process of reacquainting ourselves with the natural world 'in us' and 'out there' must begin soon. Either that or it will be imposed on us. In that sense the plight of villages like my home of Little Harbour is not just a fisheries problem – it's a dramatic sign that our whole culture has gone awry. ■

Ray Rogers used to fish for a living. He is now a doctoral candidate in environmental studies at York University, Toronto.

Also Worth Reading on ... the Sea

Straddling the line between journalism and literature is Rachel Carson's exuberant classic, **The Sea Around Us**, originally written in 1950. The newest edition (Oxford University Press, 1989), with a solid afterword by marine scientist Jeffrey Levinton, is still a prescient introduction to the history and mysteries of the sea. Another useful journalistic study is **Our Common Shores** (Earthscan/UNEP, 1990) by Don Hinrichsen, former editor of the Swedish environmental magazine *Ambio*. Hinrichsen summarizes the major policy and pollution issues in a comprehensive sweep through the world's seas. Also worth a look is **The Living Ocean** by Boyce Thorne-Miller and John Catena (Friends of the Earth/Island Press, 1991), both a survey and a plea for protecting the diversity of marine ecosystems. **World Resources 1992-93** (Oxford University Press, 1992) a collaboration between the World Resources Institute, the UN Environment Programme and the UN Development Programme has a fact-filled chapter on oceans and coasts. For an up-to-date activist perspective two journals stand out. **Sea Wind** (available from Ocean Voice International, 2883 Otterson Drive, Ottawa, Ontario, Canada K1V 7B2) and **Greenpeace Magazine** (1436 U Street NW, Washington, DC 20009). Write to both for subscription information.

¹ A fishing method where a length of line from 100 to 200 metres is set with individual baited hooks.

PESTICIDES

Eat brown bananas

Costa Rica's poisoned plantations

NEXT time you buy blemish-free bananas, spare a thought for the sweat and suffering that brought you the chemically engineered fruit.

Around 100 people die and 10,000 are severely poisoned by the 55 million dollars worth of pesticides drenched over Costa Rican vegetables and fruits every year, according to Dr Catharine Wesseling from the National University of Heredia's Pesticide Programme in Costa Rica.

Costa Rica produces more bananas per hectare than anywhere else in the world – but at a price. A recent survey reveals that, at a conservative estimate, Costa Rican bananas are sprayed with 30 kilograms of pesticides per hectare every year compared with the 3 kilograms used on most crops in industrialized nations.

Besides severe intoxications, other reported problems include chemical burns, eye irritations and sterilizations. And Dr Wesseling is now investigating the incidence of cancer among workers who live inside the plantations.

Half of the pesticide deaths in Costa Rica are caused by Paraquat, which remains in the soil for up to 25 years after application.



PETER STALKER

The price of perfection: banana workers all over Central America must pay for our tastes.

Recent research by chemist Lilliana Abarca of the Technology Institute in Cartago revealed a horrifying concoction of toxic chemicals in the River Estrella including the cancer-inducing chemical chlorothalonil which was found in drinking water in such quantities as to be fatal to fish.

Abarca's findings were presented to the Second International Water Tribune in Holland in March. The jury found the US-owned Standard Fruit Company, which

operates large plantations in the Atlantic region, guilty of contaminating the River Estrella. But the responsibility for change belongs not only with producers and multinational companies, but with consumers too.

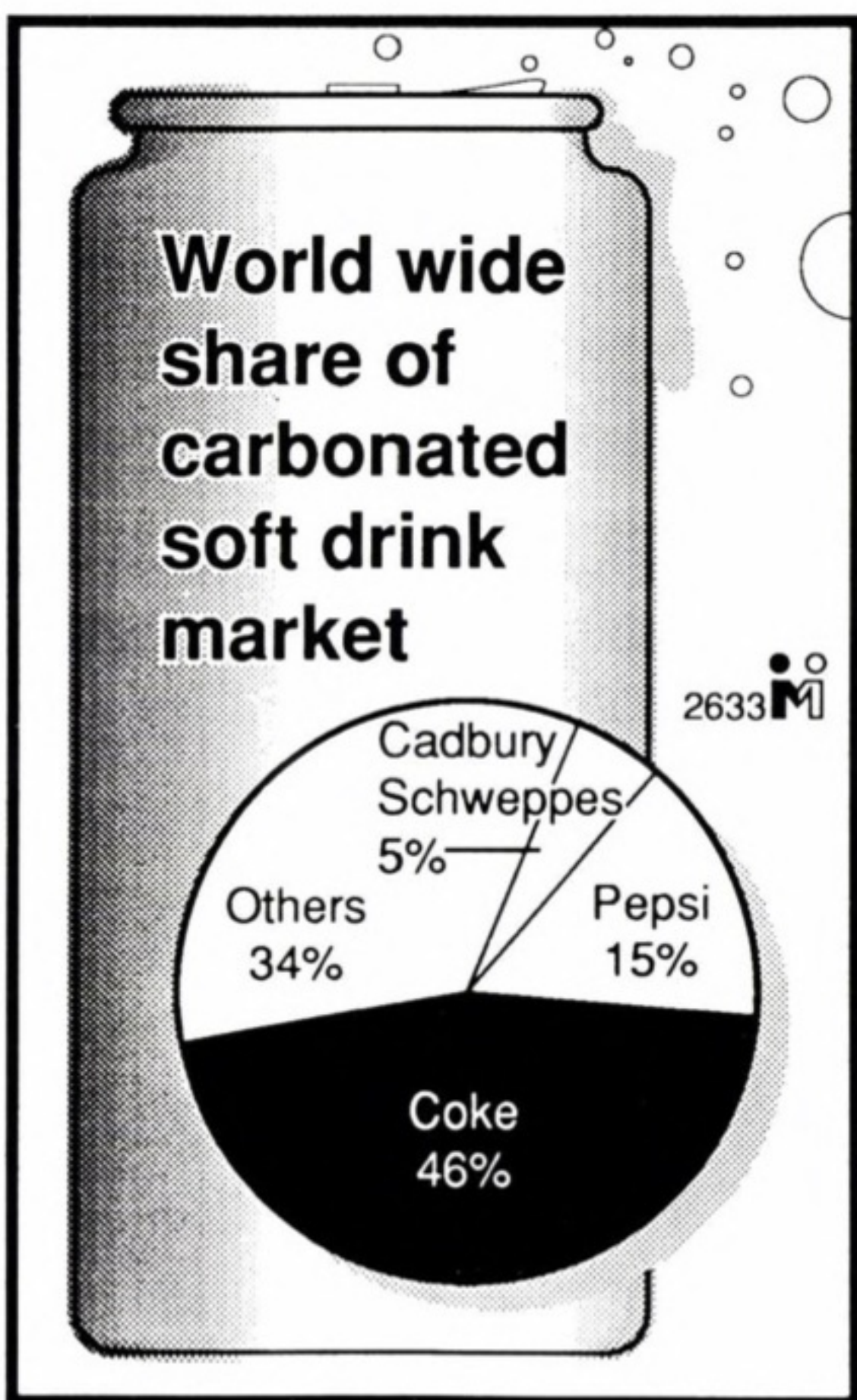
According to Dr Ronald Vargas, Research Director of CORBANA: 'If people were willing to eat bananas with brown bits, banana companies could cut out a third of the amount of chemicals they use now.'

Nicola Solloway / San José

NUTRITION

Mexico bubbles up the cola ladder

Soda-pop success worries nutritionists



A STRING of donkeys climb the jungle trail into the tiny squatter settlement of Nuevas Maravillas, straining under their load – cases of Coca Cola, Fanta and Orange Crush, beverages that daily slake the thirsts of 70 million people in Mexico.

Mexicans consume more soft drinks than any other developing nation. Indeed, they drink more pop – commonly known as *refrescos* or *chescos* – than any people outside the US. The Mexican soft-drink industry registered \$33 million in 1990 sales with consumption at 390 bottles a person – more than one a day.

Homegrown sodapop in Mexico accounts for only one per cent of all sales. The rest is controlled by Coca Cola and Pepsi. In Mexico City, the world's largest soft-drink market, where 18 million thirsty throats cry for relief day and night, Coke holds more than half the sales.

And even though Pepsi is a newcomer to the Mexican market, its 45-per-cent share in the capital is far greater than it has achieved elsewhere in the developing world. Pepsico is now flooding the nation with plastic, recy-

clable 'family-sized' servings.

Mexico's surging *chesco* consumption causes the nation's nutritionists considerable concern. In a country where 40 per cent of the population has no access to milk, a breakfast of a Coke and a 'Ganso' chocolate bar is normal for many poor people. In fact many Mexicans drink *refrescos* with all three meals, for soda pop with its high sugar and caffeine content produces quick energy for poverty-stricken schoolchildren, day labourers and market women.

An annual survey conducted by the National Institute of Nutrition places soft drinks among the top 10 foods consumed in each of the Institute's 19 survey regions, indicating that *chesco* consumption is far ahead of meat and milk everywhere in the country. The disparity is greatest in the impoverished and largely Indian south.

'In many places, *refrescos* are the only source of potable fluid,' says the Institute's Hector Borges, 'Particularly in tropical zones where people doing hard labour need to continually replace their liquid intake.'

John Ross / Mexico City / Gemini

HONG KONG

Boiling point

Chinese takeover



WITH five years left before the colony of Hong Kong reverts to Chinese rule, the pressures on both China and Hong Kong are mounting. The Chinese economy is floundering on the brink of chaos following years of corruption and mismanagement, and control of Hong Kong is seen as the 'golden egg' which will alleviate some of the problems.

China's ills have been compounded by a succession of natural disasters which have left its central province of Anhui in crisis and other northern provinces in a state of flux. Not surprisingly the southern provinces have seen a large influx of migrants from northern China – at one point this year, 10,000 people a day were entering Guangdong province – and some have made it further south across the border into Hong

Kong. If caught they are repatriated, but even so Hong Kong's official population of 5.5 million is swollen by around half a million illegal immigrants.

Hong Kong police have little power to control the situation. They are deplorably understaffed and ill-equipped technically to combat professional smuggling rackets that use the Territory as a staging post for the flow of lucrative drug and other operations between mainland China and the US. High-powered speedboats, recently outlawed, often outrun the police launches and there is a brisk trade in electrical appliances (especially televisions) and stolen cars destined for the mainland, while firearms increasingly find their way back to Hong Kong.

Nor can the Hong Kong police cope with the increase in violent crime. Use of firearms has escalated alarmingly, with automatic weapons and grenades used almost weekly. In the first quarter of 1992, there were 18 armed robberies, twice the number recorded in the same period of 1991.

Unfortunately the Hong Kong Government fails to understand the corruption in China and stipulates that co-operation with the Chinese Government has to be one of the main means of dealing with the problems. Meanwhile Chinese leaders have shown increasing interest in controlling Hong Kong policy making, inviting some of Hong Kong's top business people to Beijing.

Who knows? With increasing violence on the streets, and inflation causing money-conscious citizens to chase after the all-powerful US dollar, Hong Kong people may even be reduced to begging the Chinese Government to come in early to restore peace and order. ■

Ann Wietz / Hong Kong

New hope for black Australians

A High Court judgment in June has been hailed as a great victory for Australian blacks. The judgment may finally overturn the legal concept of *terra nullius*, which states that Australia and its islands belonged to no-one before European colonization.

The High Court's six-to-one majority decision declared that the Meriam people in Torres Strait (between Australia and Papua New Guinea) are entitled to 'possession, occupation, use and enjoyment of the lands of the Murray Islands'. The judgment is believed to have direct implications for many land-rights claims by Aboriginal and Torres Strait Islander people throughout Australia – and for negotiations between them and mining groups.

Two of the judges were overtly critical of the continuing process of dispossession, degradation and devastation of the Aboriginal people, and of the national legacy of 'unutterable shame'. 'The nation as a whole must remain diminished unless and until there is an acknowledgment of and retreat from those injustices,' said one judge.

NI Australia

Space-shuttle hazard

Just 300 flights of the US space shuttle could destroy the ozone layer, according to Russian scientists Valery Bundakov and Vyacheslav Filin. They warn that rocket exhausts and supersonic aircraft which use both liquid and solid propellants are causing serious damage to stratospheric ozone.

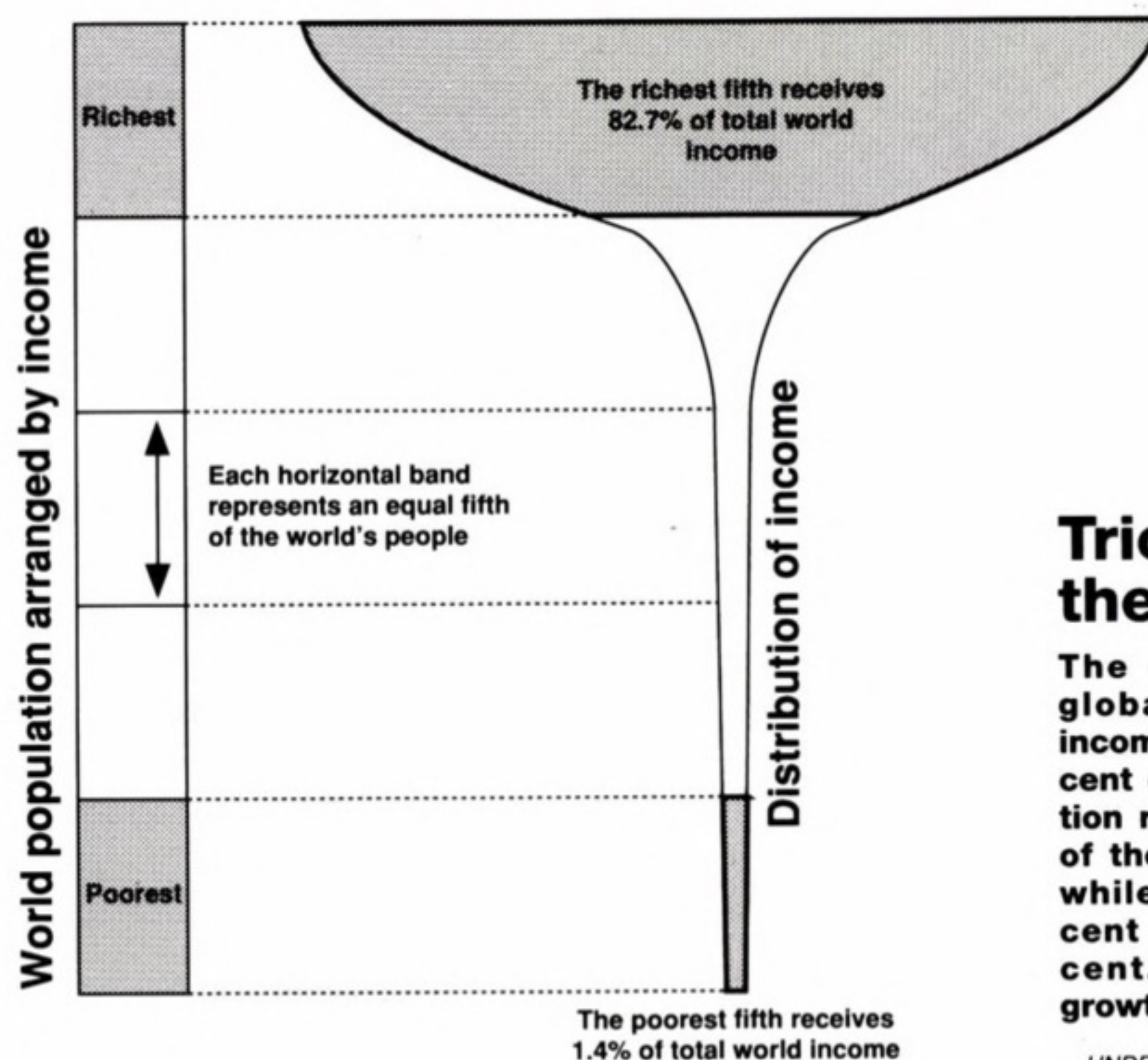
Bundakov and Filin helped design the Energiya heavy-lift rocket which uses only liquid fuel even though this complicated the whole endeavour considerably.

New Renaissance, Vol 2 No 3

Death be not proud

Dead people in China are robbing the living of resources, money and even food, according to *Farmers Daily*, a Chinese official newspaper. The money spent on funerals for the seven million people who die in China each year could build 14,000 schools, the wood used for coffins could build 1.7 million houses, and land used for burial could, if planted with crops, feed four million people for a year. 'Why do the dead loot the living like this?' the paper asked. Meanwhile, *China Daily* reported that a record 30.7 per cent of the people who died in China last year were cremated, as a pro-cremation campaign continues to make progress against tradition.

Consumer Currents, May 1992



Trickle-up theory

The diagram shows the global distribution of income. The richest 20 per cent of the world's population receives 82.7 per cent of the total world income while the poorest 20 per cent receive only 1.4 per cent. Global economic growth rarely filters down.

UNDP's Human Development Report 1992

HUMAN RIGHTS

ARTHUR WHELAN



Stockbrokers to shanty towns

Two determined women bridge the world

ON 15 July 1984 a 78-year-old man was taken to the military barracks in Huanta, Peru, and was never seen alive again. He had been about to leave for Lima with evidence showing that two cousins had 'disappeared' after being taken away in a military helicopter.

Zenaida Fernández, his daughter, went looking for him and found his body in a mass grave with 50 others. She contacted the local magistrate, called the press, then went to buy a coffin. On her return, her father's body was gone.

So began Zenaida's long search for justice in Peru, a country which becomes daily more engulfed in violent and chaotic confrontation between the military and the Maoist fundamentalist guerilla organization Sendero Luminoso ('Shining Path'). At least 28,000 people have been killed and some 6,000 have 'disappeared'.

Zenaida's own 10-year-old niece – who happened to be in the house when her grandfather was taken away – has vanished; a woman friend has been shot and her body dynamited; a sympathetic lawyer's arms blown off by a letter bomb.

Civil war in Peru has now added a new weapon to the letter bomb and the car bomb; the 'child bomb'. Children are paid to deliver, in ignorance, packages containing bombs. Frequently these bombs explode in the hands of the children who carry them.

Despite the threats against Zenaida she has not been subdued. She carried her protest to the Plaza de Armas, the central square of Lima, where she chained herself to the railings in front of the presidential palace. Scars remain on her arms where she was brutally cut loose.

In Huanta she set up the first Peruvian

branch of Fedefam, the Latin American umbrella group for friends and relatives of disappeared people. Threats forced her to move from house to house until she finally left for Lima, where she now runs a safe haven for people like her who come to the capital in search of information about their 'disappeared' relatives. The project, Zapallal, is being constructed entirely by its own members.

Zenaida refuses to indulge in false optimism. 'Neither the military nor Sendero can win,' she says. 'I don't think there's a way out for the country. I think it will finish in total war... For me it may all end in their killing me. Well, let them do what they will. I fear no-one but God.'

Carole Hudson is a teacher in Guildford, better known as the heart of the wealthy 'stockbroker belt' to the south of London. She spent several years in Peru and met Zenaida during her first visit to England in search of support for Fedefam. They have remained friends ever since.

Working with the Guildford branch of Fedefam UK – unusual because it is the UK branch of a Latin American organization, rather than the other way round – Carole has helped send more than 600 boxes of clothes, tools and household utensils to Lima during the past year.

The friendship between Zenaida and Carole may seem unlikely, but it works. Says Carole, 'We phone each other every Monday. Very important to keep in touch, isn't it? For her safety, and also to respond to her demands.'

David Ransom

To contact Project Peru, the UK branch of Fedefam, write to 1 St Catherine's Hill, Guildford, Surrey GU2 5EF, UK. Tel: (483) 576093 or (483) 579517.

The pace of AIDS

AIDS and HIV infection are tightening their hold on Africa. More than seven million people have become HIV-positive in sub-Saharan Africa alone since the pandemic started. In some central African capitals, according to the World Bank, over half all hospital admissions are AIDS-related.

Malawi now has the second highest total of reported cases of HIV in Southern Africa. And health experts estimate that out of a population of eight million, over 300,000 – 20 per cent of urban adults and eight per cent of rural adults – are infected with the HIV virus.

Zimbabwe too, has infection rates estimated at between 18 and 20 per cent in mid-1991. And in Namibia the number of reported cases of HIV infection leaped from four in 1986 to 1,825 by the end of November 1991, with the number of infected people doubling almost every six months.

Southern African Economist, Vol 5 No 2

Dirty business

'I think the economic logic behind dumping a load of toxic waste in the lowest wage country is impeccable,' wrote Lawrence Summers, Chief economist of the World Bank, in an internal memo (Endquote, NI 230). He went on to state that 'under-populated countries in Africa are vastly under-polluted,' and that 'only the lamentable facts that so much pollution is generated by non-tradable industries (transport, electrical generation) and that the unit-transport costs of solid waste are so high prevent world welfare enhancing trade in air pollution and waste'.

The memo, which Summers contends was written as 'sardonic counterpoint' has now led to calls for his resignation. The Bank is still denying that his views represent institutional policy.

Bankcheck Quarterly, Winter 1992

END

END Quote

"I slept and dreamt that life was pleasure, I woke and saw that life was service, I served and discovered that service was pleasure."

Rabindranath Tagore

"Looking at the Earth from afar you realize it is too small for conflict and just big enough for co-operation."

Yuri Gagarin
first human in space



The dance clubs and The Dreaming. Yothu Yindi: pioneering Aboriginal music for the whole world.



music

Tribal Voice

by Yothu Yindi (Mushroom)

Yothu Yindi (a kinship term meaning child and mother), is a 10-piece band predominantly of Yolgnu people from Arnhem Land in Australia's far north. Their music represents a fusion of cultures and provides a strong and often hypnotic beat, the reason for their rising popularity in European dance clubs.

Their latest album, **Tribal Voice**, contains two substantial Australian hit singles, *Treaty* and *Diana*. *Treaty* deals with the basic justice of gaining a document of reconciliation between Aboriginal and other Australians, while the latter makes a simple plea for a more equitable future between blacks and non-blacks. Both are sung mainly in Gumatj, a language of north-eastern Arnhem Land – and they are the first hit songs to feature an indigenous Australian language.

Yothu Yindi also scooped the pool at this year's Australian Recording Industry Awards, winning best Australian record of the year, best single, best indigenous record and best cover artwork. This is a heartening, if somewhat belated, sign that the profile of Aboriginal music is rising throughout Australia – in the field of improvised jazz, for example. But with the opportunity comes the danger that the cultural brilliance which sometimes jars the ears of Westerners might be subsumed beneath a meaningless wash of dance rhythms or melodic clichés.

Behind the medium at the

moment is an intentional message. Yothu Yindi's lead singer Mandawuy Yunupingu, who is principal of the Yirrakal community school 600 kilometres east of Darwin, says: 'Through our songs we hope to raise issues that are important not only for Aboriginal people but for Australia as a whole. Our music is a story for the future, a story for all Australians.' Yunupingu speaks of the ability to meld and share cultural values.

Politics ★★★★★

Entertainment ★★★★★

Unity

by Black Umfolosi (World Circuit)

Most music to come out of Zimbabwe (including Thomas Mapfumo and Stella Chiweshe) is from the Shona tradition and uses the *mbira* or thumb piano as the basis of its rhythms and sounds. The unaccompanied vocal group Black Umfolosi, whose debut this is, are Ndebele people and their music has an entirely different feel as a result.

In this part of Zimbabwe many of the older generation spent time in South African schools or mines. This is why the famous gumboot dance of South African miners is an integral part of any Black Umfolosi performance and why their sound has similarities to that of Ladysmith Black Mambazo. Even the name is redolent of South Africa – the Black Umfolosi Regiment were crack Zulu troops who moved to Zimbabwe in the middle of the last century. The music borrows heavily from Ndebele warrior songs with their accompaniment of drums, ululation, trills and whoops – and the group's performances feature neo-traditional dances in Zulu warrior costumes.

Yet the political stress is on unity: the multilingual title-track was a big hit in Zimbabwe and tackles

an emotive subject for this land with many cultures and a war-torn colonial history. *Lucky Moyo's 10th Anniversary* has the same theme. Commissioned to mark 10 years of independence, it revitalizes the trite melody of *Happy Birthday* with Zulu harmonies.

The two most interesting songs appear only on CD, and even with them the album lacks something: Black Umfolosi are at heart a performance group and too many of these songs drag when heard in isolation. Maybe their next release should be a video.

Politics ★★★★★

Entertainment ★★



film

Night On Earth

directed by Jim Jarmusch

After Wim Wenders' sprawling *Until the End of the World* (reviewed in **NI 231**), here's a round-the-world movie of a very

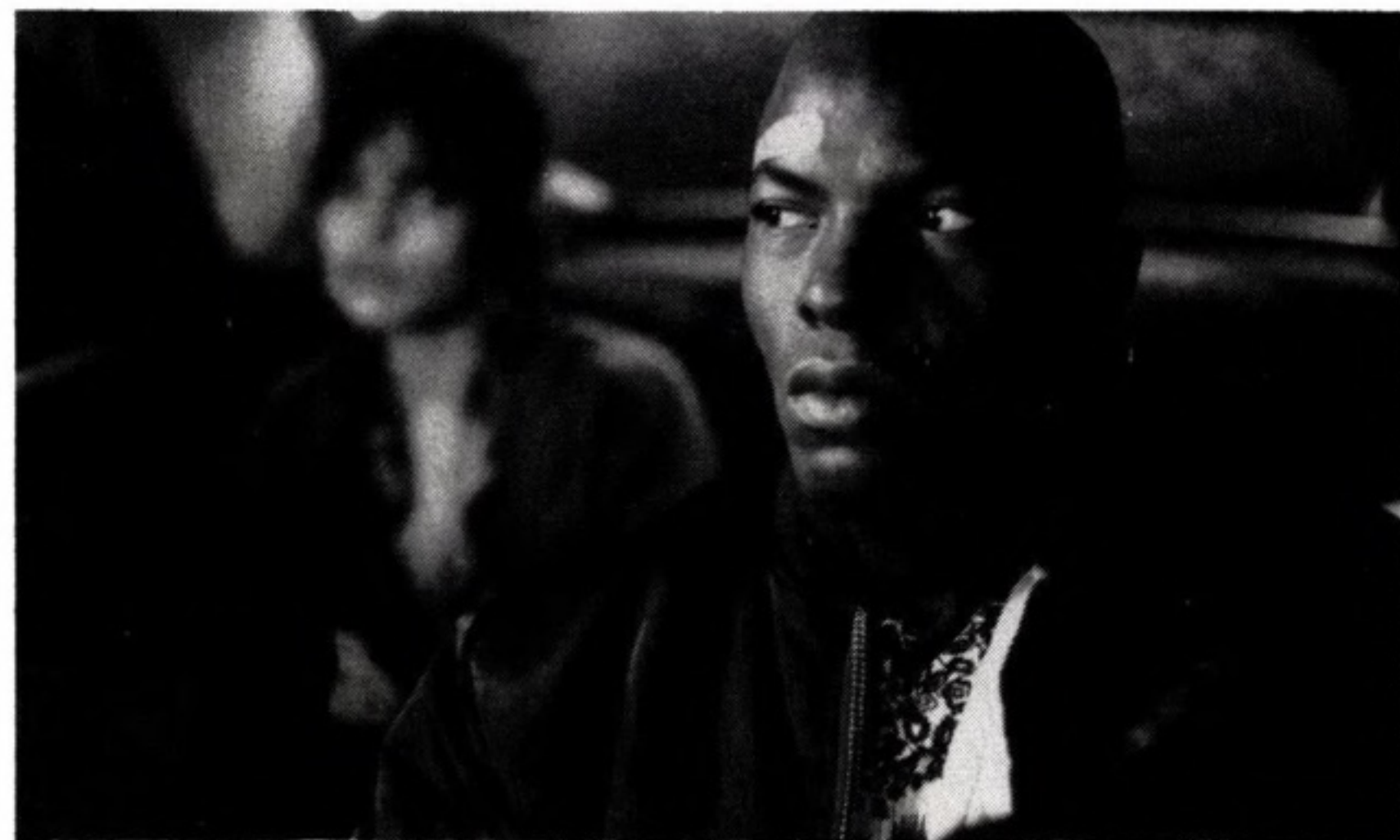
different kind. Jim Jarmusch has been one of the few directors working in the US to at least acknowledge other cultures, as when *Stranger Than Paradise* framed America through the eyes of a laconic Hungarian visitor. If Jarmusch has till now concentrated on bringing the world to America, **Night On Earth** sees him taking his vision around the world, to mixed effect.

The film presents us with one moment on the planet, as experienced simultaneously in different taxis in LA, New York, Paris, Rome and Helsinki. In the Rome story demented taxi driver Roberto Benigni talks a priest to death. The lugubrious Helsinki scene, meanwhile, is a homage to Finland's master of boozy gloom, Aki Kaurismaki. Several Kaurismaki regulars compete in out-grumping each other and the result is a courageously down-beat way to end a film.

It's in America that Jarmusch falls flat. In LA a sassy kid (Winona Ryder) gives a ride to a casting agent (Gena Rowlands), while in New York a black customer (Giancarlo Esposito) finds himself changing roles with cabbie Armin Mueller-Stahl, who has recently arrived from what was East Germany. Both are uneventful excuses for bravura performances and lack any new insight into the over-familiar settings.

In Paris, however, Jarmusch really hits on a sense of place. The appeal of this section is not so much the play-off between African cabbie Isaach de Bankolé and a blind Béatrice Dalle, but in what goes before: a beautifully played scene in which de Bankolé is taunted by two boisterous African clients, who pun mercilessly when they find out he's from Côte d'Ivoire: '*Ivoirien! Il voit rien!*' (he can't see a thing!). Here, not only does the humour ring true but Jarmusch has managed to get a grip on Paris as an African city, an aspect of it that French directors have consistently ignored.

It's a flash of inspiration in an otherwise directionless film. It's a



Taxi tales: Béatrice Dalle and Isaach de Bankolé in *Night On Earth*.

shame Jarmusch couldn't cast his geographic net wider. But the film at least suggests that it's possible to make American cinema without remaining trapped in America.

Politics ☆☆☆
Entertainment ☆☆☆



books

A Green History of the World

by Clive Ponting (Penguin)

There have been histories of the world before, like those by HG Wells and Jawaharlal Nehru (written in prison). But never one quite like this. Politics, war, diplomacy and culture figure hardly at all here. Instead this is the story, as far back as our knowledge goes, of how humankind has treated and mistreated the planet.

Few of the great names of history rate a mention. Buddha; Jesus Christ; Muhammad; Julius Caesar; George Washington; none of them are here. Queen Victoria gets mentioned twice – but only when she complains in 1837 that there are no bathrooms in Buckingham Palace and in 1875 that another of her homes is being made uninhabitable by ammonia fumes from a nearby cement works. The Spanish Armada is mentioned once but you'll never guess why.

'This book does not attempt to propose solutions,' the author says. Maybe not, but it adduces plenty of lessons and warnings which have a bearing on our present and future problems. Here is just one: 4,000 years ago the civilizations of the Indus Valley collapsed because they cut down the forests to fuel the ovens to bake the bricks to build their magnificent temples and palaces.

Good history is not just an account of the past; it also has relevance to the present and the possible future. By that test, this book is good history. Dare we hope that the great and wise placed in authority over us studied it as they sped through the air towards the Earth Summit in Rio? We know the answer – but it remains to us to pour the message into their resistant ears.

Politics ☆☆☆☆
Entertainment ☆☆☆☆

STAR RATING

Excellent ☆☆☆☆
Very good ☆☆☆
Good ☆☆☆
Fair ☆☆
Poor ☆

Reviews editor: Chris Brazier

Women Who Love Too Much

... being the book that explained why relationships can be addictive

'When we read a self-help book and underline all the passages we think would help him... we are loving too much.'

FIRST approached Robin Norwood's best-selling pop psychology book, **Women Who Love Too Much** with the scepticism I always reserve for self-help material that appears to offer an easy answer to complex psychological distress. However, I was soon completely hooked on this analysis of relationships for women (and sometimes men) as an addictive process – a strategy of focussing on the shortcomings and excesses of someone else in order to avoid confronting internal problems. Robin Norwood defines women 'who love too much' as being 'attracted not to what a man is but to his potential'; they fall into 'a pattern of picking men whom they see as needing their help'.

Ironically, in traditional 'loving too much' fashion, before I started to read the book properly for myself I gave away two copies to women friends whom I judged to be in worse straits than me. Soon, however, the book became my bible. Its clear and straightforward prose was as comforting as its analyses were painfully honest. I cannot say that it singlehandedly solved my problems but it was certainly a turning-point in my approach to relationships, sexual or otherwise. And it has played the same role for many other women.

Robin Norwood runs through a collection of sad case histories of women (and some men) who have been or are still 'loving too much' and she includes herself among them. These women are stuck in relationships that are clearly bad for them, and range from the proverbial battered wife who keeps going back for more to the woman who allows her self-confidence to be gradually annihilated by an insidious verbal cruelty.

Norwood draws from her experience as a therapist in the US to observe that women 'who love too much' have invariably grown up in dysfunctional families: families where there is a shared denial of reality; where for one reason or another the children are forced to draw on their own resources far too young, before they are really ready for such a responsibility. She observes that under these conditions women tend to become overly dependent on a person or relationship, whereas men are more often drawn

to addictive substances or workaholism.

In either case they are unable to realize fully their own potential as human beings and develop in adulthood an unhealthy dependency which in some way mirrors the conditions present in their childhood. Placed in a more healthy situation or relationship they feel uncomfortable, threatened, bored or restless and will inevitably return to the less beneficial relationships or addictions when the opportunity occurs. The book contains a stringent programme for rehabilitation of a woman 'who loves too much' in which her symptoms are paralleled with those of an alcoholic. Achieving the main objective of the programme – raising the woman's self-esteem – is a mammoth task as it entails confrontation with feelings that stem from deeply buried childhood experiences.

The book's focus leaves no room for analysis of gay, lesbian or bisexual experiences. Also, perhaps inevitably, bulimia, anorexia and alcoholism are portrayed as secondary addictions to that of 'loving too much'. But this concentrated approach does allow the author to unveil the incredibly powerful myth of romantic love that permeates our culture, whether it be in women's magazines, soap operas, advertisements, music, film or social expectations – and to set out squarely and clearly the damage that this myth has done.

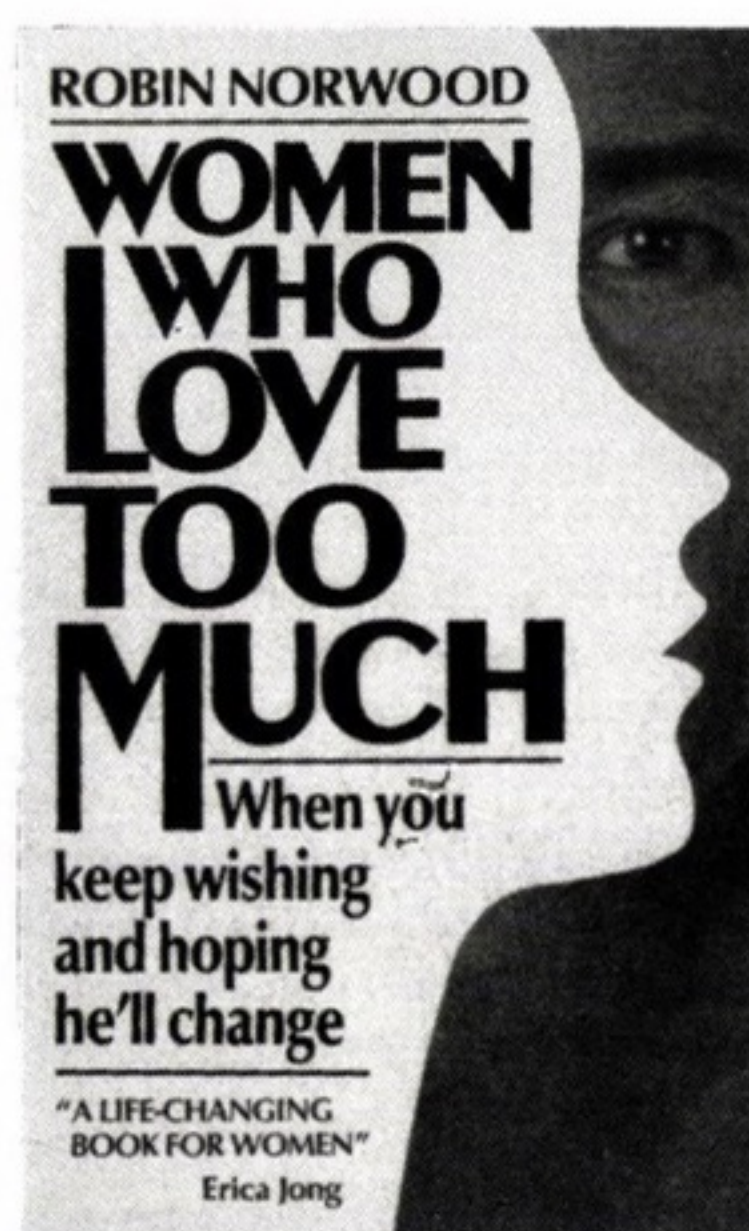
Her reading of the Beauty and the Beast folk tale is particularly telling. In the story Beauty agrees to live with the Beast, a terrifying monster, in order to save her father from his wrath. At first she finds the Beast abhorrent but when she gets to know him she grows to love him. At this point the Beast is magically transformed into a handsome prince with whom she lives happily ever after.

Our cultural bias leads us to interpret this story as showing that a woman can change a man if she loves him enough. But, as the book shows again and again, this does not happen in reality. Robin Norwood believes the tale shows something more positive. Beauty has no need for the beast to change. She loves him as he is, and because of this he is freed to become his best self.

In many ways **Women Who Love Too Much** is everywoman's story. It is a modern classic because it shows, in everyday rather than 'feminist' language, the devious sexist nature of contemporary Western culture with which all women – however healthy their family background – have to contend.

Judy Kendall

Women Who Love Too Much by Robin Norwood (Arrow/Random Century).



...that have always intrigued you about the world will appear in this, your section, and be answered by other readers. **Please address your answers and questions to 'Curiosities'.**

- After electrical torture the body retains some of the electrical impulses and as most fluids are conductors of electricity it is like adding fuel to a fire.

● For thousands of years in Western culture 'right' has stood for the status quo and 'left' for the opposition. It is interesting that the Latin word for left is *sinister*, which to us means evil, and the Latin for right, *dexter*, has given rise to positive meanings such as 'dexterity'.

The Romans apparently believed that the human soul resided in the heels – the good side in the right heel, the bad in the left. But from where these ideas of right being ‘good’ and left being ‘bad’ originated, I do not know.

A black and white photograph showing a large truck, viewed from the rear, carrying several large, dark-colored pipes on its flatbed. The truck is on a multi-lane city street. In the background, there are tall buildings, utility poles with wires, and other vehicles in the distance. The scene is captured in a grainy, high-contrast style.

● No. In a car with an engine that's been properly tuned to run on unleaded petrol, the latter is no less efficient than leaded fuel.

What's more, unleaded petrol should be used with a catalytic converter as this considerably reduces emissions of the gases which affect local air quality. These are hydrocarbons, nitrogen oxide and carbon monoxide.

To give you an idea of the scale, emissions of carbon monoxide are eight times greater and emissions of nitrogen oxide are about 12 times greater if a catalytic converter has not been fitted.

As regards emissions of sulphur dioxide, these are minimal as the sulphur content of petrol is very low.

QUESTIONS awaiting your answers:

Where did the wretched term (economic) ‘basket case’ come from? Who used it first and in reference to which country?

Stephen Langford,
Paddington, Australia

Was one of British Queen Victoria's grandmothers an African princess? Is it true that Queen Victoria's first child was black and was for this reason 'destroyed'?

Jasmine Lail,
Nottingham, UK

Can anyone recommend a book about trepannation or tell me anything about the benefits of having a hole bored in the skull?

Dafydd Saer,
Cardiff, UK

If you have any questions or answers please send them to Curiosities, **New Internationalist**, 55 **Rectory Road, Oxford OX4 1BW, UK**, or to your local NI office (see inside front cover).



*** EVERYTHING YOU ALWAYS WANTED TO KNOW ABOUT *STARVING BABIES*. BUT FELT TOO *GUILTY* TO ASK**

Shots of Islam

From the Romantic painters of the eighteenth century to today's photojournalists, the Western media has been obsessed with visual stereotypes of Islam.

Carla Power tries to take the veil from our Western eyes.

RECENTLY I have been examining the way Islam is depicted in the Western media. It has been a fascinating study. One of the most telling images I came across appeared in the prestigious British weekly *The Economist* – and is reproduced here. The caption read: 'Seventh century meets twentieth'.

The intention – of both photo and caption – was to illustrate trends in the contemporary Islamic world. But it did a lot more than that. To Western minds it presented Islam as a monolithic entity at odds with the modern world.

Stock images have always been used to convey Islam to a Western audience. In the eighteenth and nineteenth centuries, Romantic painters used a minaret under a crescent moon or the palm-studded desert to depict The Orient. More recently these images have been replaced by the mosque, the rows of men bent in prayer, the turbaned sternness of the mullah, and, of course, the veiled woman.

These are all powerful visual stereotypes. Imagine trying to come up with equally powerful imagery of, for example, the European Economic Community, or the US Democratic Party, or the Catholics.

But the stereotypes about Islam are not only visual – they are verbal too. Let me give you an example. Recently the BBC approached Discovery Television, an educational cable channel, to discuss the transmission of a documentary series on the social and cultural aspects of Islam based on a book by a Cambridge scholar. Discovery refused, declaring: 'For us, Islam means terrorism, fundamentalism and the mistreatment of women. If you can't major on that, we don't want to know.'

Why is the image of an entire civilization restricted to these props? One explanation could be that since the 1979 Iranian revolution, the Islamic revival has been news. News is generated by public events: revolutions and elections, armed struggles and *fatwas*.

Media coverage of Islam is generally not of Islam as a religion but of Islam-related events. Obviously, the Western public should know of Islam's role in the Jordanian or Algerian elections. We should read of the religion's status as a potent force in the emerging Central Asian republics, and of the introduction of the *sharia* penal code in the Sudan. But these are public activities. To limit the discussion of Islam to this area is to reduce a civilization to a few activities of a number of its adherents.

Portraying a political brand of Islam or certain issues of Islamic public life – like the veiling of women – as the essence of the religion is like guessing the reasons for a couple's divorce from a vacation snapshot. One should read a photograph, but only in combination with other sources of information. An image can illustrate a manifestation of a belief – a veil on a woman, or a row of praying men. However, a photo can never provide an image of faith itself. An individual's relationship to her or his god is not a news event. Nor is the concept of social justice in Islamic thought.

The snapshots we receive of Muslim life often help to perpetuate the image that Islam stands outside the modern world. Exoticism is photogenic stuff. Most Western readers would be struck by the seeming incongruity of the picture in *The Economist*. Veiled woman meets fluorescent-lit laboratory, science meets faith, 'seventh century meets twentieth'. The caption implies that the veiled woman is a vestige of another time. Much like the images of Afghan *mujahidin* controlling anti-aircraft missiles, or of mullahs holding microphones, the impact of the picture relies on the shock of seeing 'their' world colliding with 'ours'.

In the United States and – to a lesser extent – in Britain 'multiculturalism' has spawned a celebration of the variety of cultures within our own society. Many have embarked on a revaluation of our culture by challenging the notion that it is straight, white, male and middle-aged. Reading the Qu'ran in a university course on Western Literatures is viewed as politically correct. But attempting to apply its teachings to the modern world is often seen as incongruous. Rarely, I think, do we conceive of other societies as being 'multicultural' in their own way – say, by mixing religion and Western standards of technology.

But the Islamic revival should force us to look at all these issues more carefully. It should make us examine what we mean by 'modernity' – and by 'development'. The Iranian revolution exploded the myth that there is a single path to development. No longer could Western analysts trumpet the inevitability of the march from industrialization to increased literacy to secular

humanism and Western-style political institutions. That troubled them – but didn't necessarily make them think further.

In many ways Iran's revolution was entirely modern, even in the narrowest sense of the term. It was the world's first major 'cassette revolution', in which mass media and technology played a major role. While the Ayatollah Khomeini was living in exile in Paris in the days leading up to the Revolution, bootleg recordings of his sermons circulated within Iran and abroad and proved a useful tool for the Islamicists.

The growing strength of Islamic political parties in democratic elections demonstrates, yet again, that there are many roads to many modernities. Early this year, the projected victory of the Islamic Salvation Front in the first round of Algeria's general elections prompted the Government of that country to dissolve parliament, cancel elections, and ban the party. This won considerable sympathy from the 'modern' West. Yet which is more 'modern'? A party advocating the conflation of church and state elected by the democratic process? Or a secular dictatorship?

We in the West have not really begun to understand that the modern world is not necessarily Westernized, secular and industrialized. How much longer will it take for the dinar to drop? ■



ABBAS / MAGNUM

US-born **Carla Power** is research fellow at the Oxford Centre of Islamic Studies.

Brazil

THIS is not a serious country.' Thus spake General de Gaulle, and it is a sign of the times that his scathing judgment of Brazil, the world's fifth-largest country, is now being invoked in a press which had accustomed itself to more affectionate clichés, such as 'sleeping giant' and 'country of the future'.

Brazilians had grown used to reacting to economic and social ills with a mixture of optimism and fatalism. Optimism was always strongest among the urban middle class, spawned by the boom years of military government (1964-85) during which Brazil accumulated the developing world's largest foreign debt (estimated at \$121 billion). Fatalism, along with football and Carnival, has always been the refuge of Brazil's underclass; an estimated 58 million people (almost 40 per cent of the population) live below the poverty line.

But today defeatism seems to be sweeping the country as the economy, the world's tenth largest, sinks deeper into stagflation. During 1990, when President Fernando Collor de Mello took office as the first directly-elected president since 1960, his mostly unsuccessful efforts to control galloping



expressing their impatience at the slow pace at which the economy is being 'opened up'.

The President's discredit is one aspect of the loss of faith in politicians. The collapse of old political certainties has coincided with stirrings of a true sense of citizenship, manifest in energetic attacks on government corruption by a once-docile press and in invasions of the futuristic capital, Brasília, by war-painted native people demanding recognition of their land rights.

Though the economic crisis has both intensified capital flight and driven middle-class emigration to unprecedented levels, those who have no option but to stay are finding their own responses to official inertia. Like the residents' associations of the *favelas* (shanty towns) of São Paulo, who run their own creches and housing improvement programmes. Like the rubber-tappers of Amazonia, who are resisting deforestation and seeking environmentally sustainable community development for their Extractive Reserves. People are starting to take their destiny into their own hands.

Alex Shankland

inflation caused the economy to shrink by four per cent.

Collor won power by selling himself as a paladin who would bring morality to a corrupt system, and 'modernity' (in the shape of privatization and the removal of tariff barriers and subsidies) to the flagging economy. This image, which was

largely fabricated by powerful media giants such as TV Globo (the world's fourth-largest television network) is now in shreds. Corruption is still rife, the Government is powerless to stop the violence which strikes down street children and rural union leaders alike, and multi-nationals and creditors are

AT A glance

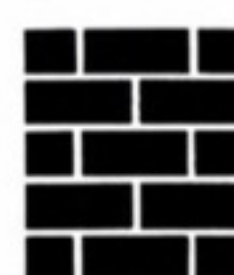
Excellent ★★★★★
Good ★★★★
Fair ★★★
Poor ★★
Appalling ★



INCOME DISTRIBUTION ★

Richest 10% get 51.6% of total income; poorest 50% just 3.7%.

1981: ★



SELF-RELIANCE ★★★

Debt crisis and liberal economic agenda give exports priority over basic necessities.

1981: ★★★



POSITION OF WOMEN ★★★

Some advances in 1988 Constitution but culture still emphasises *machismo*.

1981: ★★



POLITICS

Elected president but same powers behind scenes.



1981



LITERACY ★★★

Officially 82.4% but masks semi-literacy and patchy educational system.

1981: ★★★



FREEDOM ★★★★★

Flourishing under 1988 post-military Constitution.

1981: ★★



LIFE EXPECTANCY ★★★★★

66 years (US 76 years); but in north-east and Amazon as low as 45.

1983: ★★★

Leader President Fernando Collor de Mello
Economy GNP per capita \$2,540 (US \$20,910)
Main Exports: Coffee, soymeal, sugar, orange juice, iron ore, steel products, motor vehicles, aircraft.

People 150.4 million (74 per cent urban)

Health Infant mortality 60 per 1,000 live births (US 9 per 1,000)

Culture Of population estimated at five million in 1550, some 250,000 indigenous Amerindians remain. The 54.77 per cent classified as 'white' are descended from European (mainly Portuguese) and Middle Eastern immigrants; 5.89 per cent are descendents of African slaves; intermixing has produced those classified as 'mulattos'. There are also Japanese; immigration occurred during the coffee boom of the beginning of this century.

Languages Portuguese and many local languages.

Religion Largely Roman Catholic, but some Protestants and others.

Sources The State of World Population 1992; The State of the World's Children 1992; World Bank World Development Report 1991; Almanaque Abril 1990; Gazeta Mercantil Information Centre.

Last profiled in February 1981



THIS MAGAZINE AND YOU

THIS MAGAZINE ABIDES BY THE PCC's DECISIONS

PCC

This space has been donated by the publisher

ADVERTISING IN NEW INTERNATIONALIST

Tel: 0384 373421 Fax: 0384 441904

Subscribe now – simply fill in your details and mail the coupon to your national subscription office listed on the inside front cover of this edition of the **NI**.

4NN8A

THE GREENPEACE BIKE RIDE

**Sunday 20th
September 1992**



**Please make cheques payable to "Greenpeace Bike Ride" and send your entry to The Greenpeace Bike Ride, Open Air, PO Box 377, London SW9 9LS
Information 071-326 1453**

NI

ABC
AUDIT BUREAU OF CIRCULATIONS
CONSUMER PRESS

UK advertisers: £1.25 per word plus VAT. Minimum order 30 words – £37.50 plus VAT. Discount on three or more advertisements subject to negotiation. Copy date: seven weeks in advance of cover date, e.g. 8th April for June issue. Classified advertisements should be prepaid, cheques payable to New Internationalist Publications Ltd., 55 Rectory Road, Oxford OX4 1BW, UK.

North American advertisers: \$2.50 per word. Minimum order 30 words – \$75. Please contact Wayne Ellwood at 1011 Bloor Street West, Toronto, Ontario M6H 1M1. Tel: (416) 588 6478.

SAY NO TO ALL WAR. Join the Anglican Communion's movement for peace. Write: *Anglican Pacifist Fellowship, Walters Farmhouse, Brenchley, Tonbridge, Kent TN12 7NU, UK.* Tel: (089272) 3962. New Zealand: A.P.F., 4 Roland Hill, Glen Eden, Auckland 7. USA: Episcopal Peace Fellowship, 620 G Street SE, Washington DC 20003.

THINKING ABOUT COMPUTERS? We are a small consultancy specialising in advice to small businesses and voluntary organisations. We can also supply you with all necessary equipment and services. *Appropriate Technology (UK) Ltd., 99-101 Pixmore Avenue, Letchworth, Herts., SG6 1QX, UK.* Tel: (0462) 481888.

SERVAS suggests that you may foster international peace by becoming a traveller and/or host in its worldwide network of international hospitality and friendship. Please send a stamp. *North America and Canada: US Service Committee NI, 11 John Street, Room 706, New York, NY 10038. Australia: Servas Australia NI, 16 Cavill Court, Vermont South, Vic. 3133. Rest of the world: Servas International NI, PO Box 1035 Edinburgh EH3 9JQ, UK.*

THE GLENCRAIG CAMPBELL COMMUNITY, situated on the shores of the Belfast Lough, is a land-based community with a school, workshops and homes for handicapped children, teenagers, adults and co-workers. If you are interested in this challenging and fulfilling life write for more information to V. van Duin, Glencraig Community, Craigavad, Holywood, Co. Down BT18 0TB, UK.

NATURAL FRIENDS is a unique friendship/contact agency. If you seek other sincere people who share your important concerns, you can find success by joining our very large, nationwide membership. For full details, please send a stamp to *Natural Friends (NI), 15 Benyon Gardens, Culford, Suffolk, IP28 6EA, UK.* Tel: 0284-728315 (anytime).

WORLD GOODWILL Together all people of goodwill are building the New Humanity. Free quarterly newsletter on New World Order, Africa, UN, Global Spirituality, Development. Papers on meditation, Ageless Wisdom etc. *World Goodwill, 3 Whitehall Court, London SW1A 2EF, UK.*

LATIN AMERICA Low cost flights and adventure holiday journeys 3/4/5 weeks. Brochure: *Journey Latin America, 16 Devonshire Road, London W4 2HD, UK.* Tel: 081-747 8315.

SENDING PERSONAL EFFECTS, BAGGAGE, FREIGHT ABROAD? Contact the specialists. *Express Export Services Ltd., 143 Wardour Street, London W1, UK* on 071-734 8356/7/8. Collections from anywhere in the UK. Goods shipped to all parts of the world safely and economically. AMEX, VISA and ACCESS accepted.

FOR SALE: One living unit in large house set in 14 acres of Mid-Wales. Some shared facilities and responsibilities. £39,000 (plus small service charge). Please write for details to *Dol Llys Hall, Llanidloes, Powys, SY18 6JA.*

IDEAS EQUAL TO OUR TIMES Schumacher College scholars (Norberg-Hodge, Sheldrake, Roszack, Max Neef, Naess, Bohm, Shiva, Henderson and more) on videotape. Details: *Shepherd Production, 4/4, Crane Court, Fleet Street, London EC4A 2EJ.* Tel: 071-583 5047.

DEAF CHILDREN, wherever they are, need help and understanding. In developing countries both are in short supply. Please help us to increase both. *Initiatives for Deaf Education in the Third World, 9 Church Walk, Much Wenlock, Shropshire TF13 6EN.*

WOMAN ELECTRICIAN VOLUNTEER Spanish speaking wanted to assist in building a workshop in Nicaragua where women can be trained to make furniture. Contact *CIT 7b Broad Street, Nottingham NG1 3AJ.* Tel: 0602 470906.

1492 – 1992: 500 YEARS OF INDIAN RESISTANCE. Commemorative stamps, postcards and contacts leaflets available. Send SAE for details to: *Paper Drum, PO Box 57, Liverpool L22 2BS.*

NORTH-SOUTH TRAVEL LTD Discounted air fares worldwide. Tel: (0245) 492882 and 492872.

WANT AN OUT OF PRINT BOOK? Perhaps we can help. We need only the title and author. Fiction or non-fiction, any subject. No success, no charge. Overseas enquiries welcome. *DC Books, 5 Exeter Drive, Spalding, Lincs. PE11 2DY, UK.*

Green Working Holidays



Desert Reclamation in Spain: Join our vital research, whether expert or starter. You pay from £49 and work 24-hours weekly. Sun! Shared purpose! Good food! Good company! Full details £1 from Sunseed Trust, Registered Charity, Unit-N, P.O. Box-2000, Cambridge, CB3 0JF. Tel: (0223) 467659 / 462244



A Permaculture Design Course for Women

with
**Lea Harrison from
Eco-Logical Solutions Australia**

Dates: Sunday 20th September - Saturday 3rd October 92.

Venue: Devon or Dorset.

Fees: Negotiable, rate yet to be finalised, full or part board, poss option camping.

Contact: Johanna Jackson, 2 Horsebrook Cottages, Avonwick, Devon, TQ1 09EU. 0364 73937
or Lin Simonon, 11 Grove Close, Totnes, Devon, TQ9 5EP. 0803 866432.



WORK for PEACE

THE Peace Pledge Union is looking for volunteers to help with a variety of work in our central London office (lunch and help with travelling expenses provided). There are also many ways to work for peace in your own area.

To find out more, please write to: *Peace Pledge Union (NI), Dick Sheppard House, 6 Endsleigh Street, London WC1H 0DX, or telephone: 071-387 5501.*

A unique shop, to excite the senses:
Rugs, quilts, cushions, containers, lighting.



Craft made; skilfully designed; affordable.

OXFORD: King Edward Street
CHELTENHAM: Regent Arcade
WOODSTOCK: On the A44

one village
The World Shop

COURSES AND CONFERENCES



University
of Southampton

POSTGRADUATE STUDIES IN LAW

LL M, M A (Criminal Justice)
M Phil, Ph D

One year taught courses assessed
partly by dissertation; research degrees.

LL M

Specialist areas include:

Environmental Law
International Law of the Sea
Admiralty
Carriage of Goods by Sea
Marine Insurance
International Trade
EC Business Law
International Human Rights
Information Technology Law

M A (Criminal Justice)

Specialist options in Penal Policy, Non-Custodial Sanctions,
Police Governance, Juvenile Justice, Criminal Responsibility,
in addition to 'core' subjects.

M Phil and Ph D

Facilities are available for research in most legal subjects.

Prospectus from: Postgraduate Tutor, Faculty of Law,
University of Southampton, SO9 5NH, UK.
Tel: 0703 593551 Fax: 0703 593024

HERIOT-WATT UNIVERSITY EDINBURGH



INSTITUTE OF OFFSHORE ENGINEERING MSc COURSES IN MARINE RESOURCES

The Institute offers two well established MSc/diploma courses:
MARINE RESOURCE DEVELOPMENT AND PROTECTION and
MARINE RESOURCE MANAGEMENT. Both are multidisciplinary
courses supplying a thorough grounding in marine environmental,
resource and technology issues with further specialist options in, for
example, Diving Science and Estuarine, Coastal and Island Development.
The courses are available at the Institute's main bases both in Edinburgh
and in the Orkney Islands.

For full details please contact:

Dr Hamish Mair (Course Tutor),
Institute of Offshore Engineering,
Heriot-Watt University, Riccarton,
EDINBURGH, EH14 4AS.
Tel: 031 449 3393

The 1992 Schumacher Lectures

Saturday 10th October 10 a.m. to 7 p.m. The Colston Hall, Colston Street, Bristol

RE-VISIONING SOCIETY

Four great thinkers and activists look towards
a sustainable future based on spiritual and ecological values.

Sir James Goldsmith

Industrialist turned environmentalist

Susan George

Author of "A Fate Worse Than Debt"

Herman Daly

Author of "For the Common Good"

Fr. Bede Griffiths

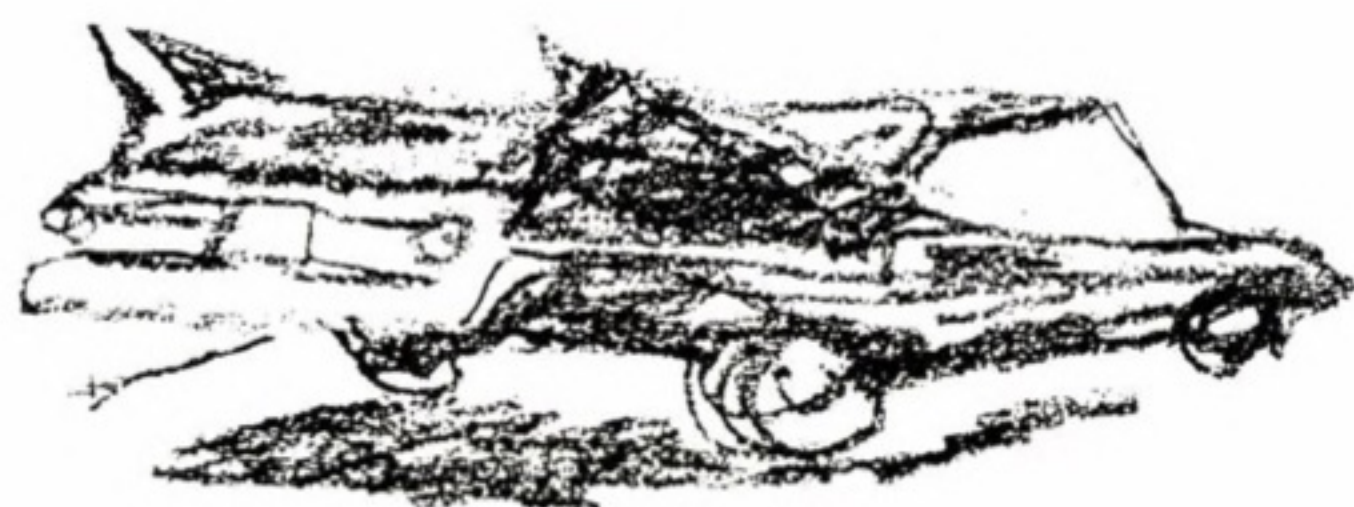
Author of "The Marriage of East and West"

Tickets £15.00. Further details from:
The Schumacher Society, Ford House, Hartland, Bideford, Devon EX39 6EE.
Tel: (0237) 441621 Fax: (0237) 441203

GREENBELT 92

CASTLE ASHBY
NORTHAMPTONSHIRE
AUGUST 28-31

JOURNEYS OF THE HEART



CONTRIBUTORS DRAWN FROM ACROSS THE GLOBE FOR 4 DAYS OF ARTISTIC EXCELLENCE.

SEMINAR PROGRAMME: SPEAKERS INCLUDE

GUSTAVO PARAION(NICARAGUA) **HENRI NOUWEN**(HOLLAND) **JOHN SMITH**(AUS) **VISHAL MANGALWADI**(INDIA) **ERIC DELVE**(UK)

MUSIC INCLUDES : RUNRIG, MARTYN JOSEPH, BRUCE COCKBURN, MIKE PETERS & BAND, DES'REE, BOB GELDOF AND THE HAPPY CLUBSTERS, JASON REBELLO & JOCELYN BROWN, RONNY JORDAN, BEN OKAFOR, SAL SOLO

PLUS: HEATHCOTE WILLIAMS' "AUTOGEDDON" PERFORMED BY ROY HUTCHINS

FINE ART EXHIBITION, FILM, FASHION, FRINGE...

TICKETS AVAILABLE ON SITE:

ADULTS £53, CHILD £29, STUDENT £47, DAY TICKETS £17 PURCHASE ON SITE ONLY.
SPECIAL CONCESSIONS AND FAMILY TICKETS ALSO AVAILABLE CALL:

071 700 1335 FOR INFO AND CREDIT CARD BOOKINGS

071 609 4830 FOR PROGRAMME INFORMATION

COMPACT PETERS ATLAS OF THE WORLD

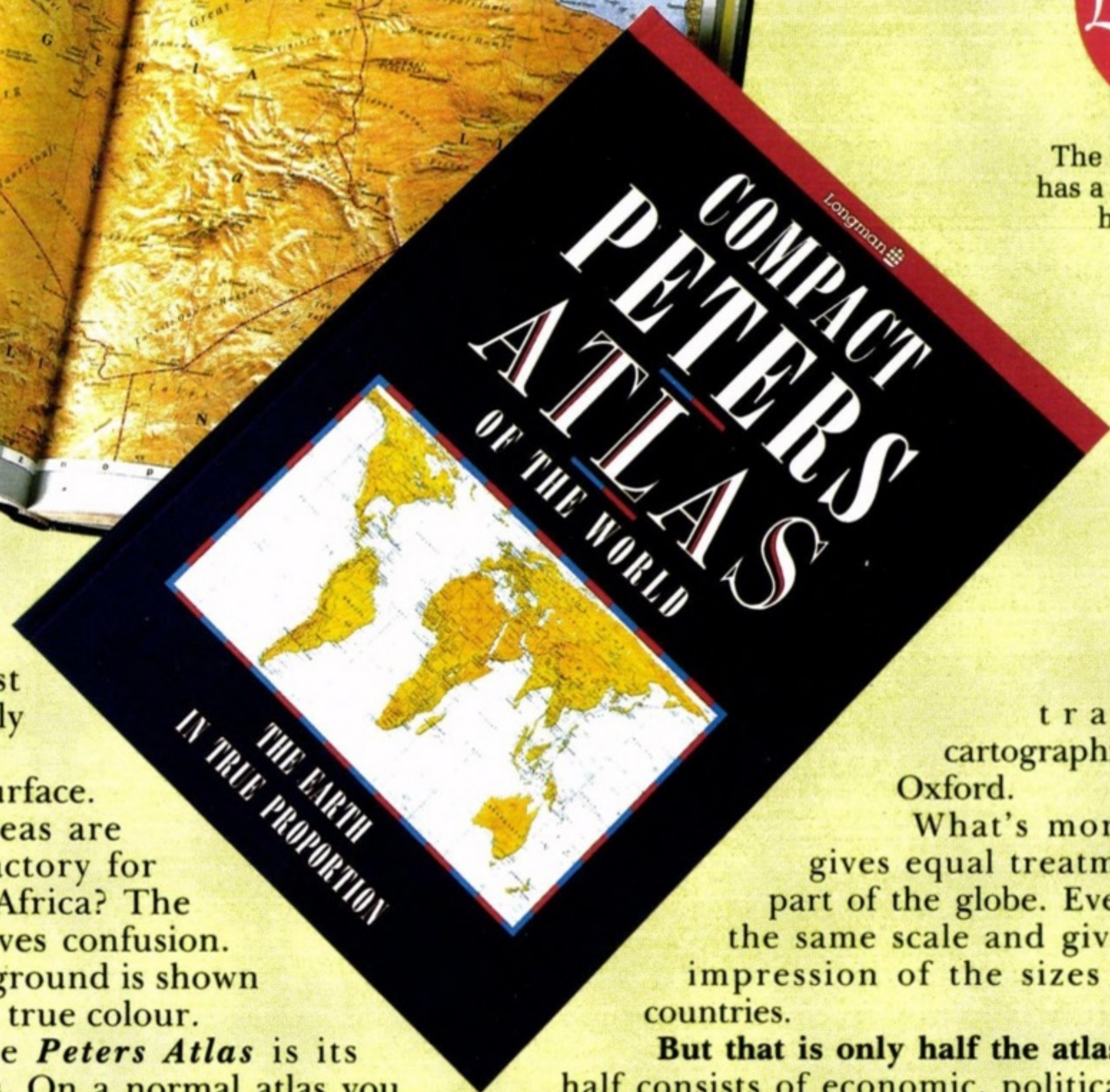
The atlas which shows the world in its true proportion for the first time

NEW COMPACT EDITION • NEW COMPACT PRICE

The first atlas to show countries according to their true surface area — unlike existing atlases which have a European bias.

£15.99

The Compact edition has a new wipe-clean, hardback binding and measures: 12¹/₂" x 8³/₄" (315mm x 223mm).



HERE'S your opportunity to own one of the first copies of the *Compact Peters Atlas of the World*, offered at a remarkably modest price. The *Compact Peters Atlas* is distinctly different from other household atlases.

Take its realistic view of the earth's surface. In other publications, all low-lying areas are shown in green. That might be satisfactory for Europe but what about the deserts of Africa? The *Compact Peters Atlas of the World* removes confusion. Vegetation is shown green while barren ground is shown brown so the Sahara Desert is shown in a true colour.

A second distinctive feature of the *Peters Atlas* is its representation of mountains and valleys. On a normal atlas you follow a series of contour lines and compare the shades with a 'key' elsewhere. In this Atlas you see the mountains immediately because they have been based on a series of relief models. These have been photographed and the pictures painstakingly tinted by hand. This gives a remarkable 3-D effect — you feel you are looking at the earth itself.

The *Peters Atlas* is a unique blend of technological innovation and human skill, making use of both Europe's most modern Scitex computer installations in Switzerland and the expert skills of

traditional cartographic designers in Oxford.

What's more, this atlas gives equal treatment to every part of the globe. Every map is on the same scale and gives an instant impression of the sizes of different countries.

But that is only half the atlas. The second half consists of economic, political, social and geographical information neatly condensed into a series of colourful world maps. The subjects — 44 in total — range from Language to Life Expectancy to Prostitution. Want to know where the world's tin comes from or which countries have the highest incidence of child labour? This Atlas will show you instantly.

The *Compact Peters Atlas of the World* with its wipe-clean hard cover is just the thing for the living room or classroom... and at a new compact price too.

ORDER FORM FOR COMPACT PETERS ATLAS

To: New Internationalist,
55 Rectory Road, Oxford OX4 1BW, U.K.

UNITED KINGDOM PRICE: £15.99 + £2.95 p&p
EUROPE PRICE: (including Republic of Ireland): £15.99 + £3.95 p&p
REST OF WORLD: £15.99 + £9.95 p&p (airmail only)

Yes, I would like.....copies of the COMPACT PETERS ATLAS.

PLEASE COMPLETE BELOW IN BLOCK LETTERS

NAME.....

ADDRESS.....

.....

.....

.....

Postcode.....

PAYMENT DETAILS

My total order value is £.....(remember p&p)

PAYMENT METHOD (please tick box)

- ☐ I enclose a cheque/money order payable to New Internationalist
OR
☐ I authorise you to debit my VISA / MASTERCARD (including ACCESS)* for the items on this order.

*Delete which cards are not applicable.

Signature.....

Card Expiry Date.....

My card number is:

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

This information can be included in a letter or on a photocopy of the page if you do not wish to cut out this order form.

Unique presentation

- Realistic view — superb detailed three-dimensional representation of hills and mountains, including Antarctica.
- Satellite photos combined with hand-tinted artwork display vegetation accurately.
- 246 thematic maps — climate, religion, population, sport. A fascinating summary of contemporary life.
- Simple index — a neat way to find even the smallest town shown.
- Standard scale — allows instant comparison of areas of land and sea from one page to another.

GUARANTEE: If you are not happy with the book, just send it back within ten days and we will gladly refund your money.